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PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Cases and Observations on the use of Strychnia, in Intermittent Fevers. By J. E. MCGIRR, A. M., M. D., Chicago.

There is perhaps no practitioner, who has resided for any length of time in those districts where Intermittent Fevers prevail, but has met with cases of agues, more commonly old and sometimes even recent agues, in which his best directed efforts were powerless to restore deranged secretion or perverted nutrition. He has been compelled to see the sallow and emaciated being, perhaps a near and dear friend, wearing daily away, until the hollow cough and the sunken and lustreless eye have shown too plainly that the days of the victim were few for this world. Having met with such in my practice in the Juniata district, of Pennsylvania, it was with no small degree of satisfaction that I first learned from Professor Brainard, the advantages he has derived from the use of Strychnia in cases of this nature, in the Chicago Hospital, under his direction. I witnessed the salutary effects of its use and resolved to try it if an opportunity offered. The following are cases in which I have tried it and they will show for themselves. I would merely premise that the crystals of Strychnia were used.

CASE 1.—Mrs. F., æt. 28, labourer's wife, whose health previously to her attack of ague had been good, and whose habits were regular, placed herself under my care on the 15th of June last. She states that she has had the ague for several months, thinks since October of last year, at intervals, and she used Sappington's pills, which mostly arrested it, for a few days, but they afforded her no permanent relief. She has now the ague every second day; the shake occurring about 10 o'clock, A. M. Her tongue is coated white; skin harsh and dry; head-ache and general lassitude; bowels irregular; great thirst and occasional vomiting; spleen enlarged; breathing oppressed; much emaciated and without any appetite. On percussing, the chest sounds clear; auscultating, the breathing is found distinct over the whole chest. She is nursing a child four months old.

I ordered her quinine, ten grains, with one-sixth of a grain of sulphate of morphia, to be taken, night and morning, for four days.

16th. She feels much better. Her shake to-day was much lighter than usual, but the quinine lies heavy upon the stomach and was to-day rejected. The spleen is much reduced in size. I may here state that M. M. Valleix and Gouraud, think that quinine has no effect upon the volume of the spleen in ague—London Lancet, vol. 6, p. 397—while M. Piorry contends that it has. Whether it was the remedy that reduced the size of the spleen, in this case, I will not say; but that it was reduced and that no other remedy was exhibited but that ordered, I unhesitatingly assert, and my opinion is with those who believe in its efficacy, in this respect. As the stomach did not bear the quinine well, I for the first time ordered the Strychnia, in the manner recommended by Professor Brainard, namely: one-eighth of a grain, three times, daily, a dose to be given after each meal. He says, (Journal, vol. 2, p. 118,) "that when it is mixed directly with the contents of the stomach, it is less likely to produce unpleasant effects."

20th. Feels better than she has done since her first attack. The shake has left her, as also, the headache; tongue

clean; bowels regular; able to sit up again, and appetite better. Strychnia to be continued until she takes 2 grains more.

I saw her on the 20th of October up to which time she had continued well and without a relapse.

CASE 2.—J. C., æt. 34, a short, thick set, labouring man of regular habits, and whose health previous to his attack of ague had been excellent, applied to me on the 30th of August. He says that he has had the ague since May, and that he has been able to check it with quinine, for a week or ten days, but that it would always return again. His present condition is, impaired digestion; bowels lax; countenance blanched; tongue coated and white; pain over the eyes; skin dry and harsh; urine scanty, deep red, and scalding; pulse irregular and quick; shake every day in the forenoon. Percussion and auscultation, found nothing irregular to note in the chest.

As he complained that he felt a chill coming on, I ordered him twenty grains of quinine, and to return on the first of September.

Sept. 1st. One-eighth of a grain of Strychnia ordered three times each day.

5th. Shake arrested; head much better; bowels more regular; urine improved in quantity and appearance; pulse more regular; appetite not much better. I directed him to continue Strychnia until he had taken two grains more.

16th. He came back to-day with a return of his disease; he had eaten a portion of water-mellon and was immediately attacked with the ague. I gave him fifteen grains of quinine and one-sixth of a grain of morphia to be taken to-night, and the same quantity for to-morrow morning.

17th. Had no shake to day; feels better; but his appetite is very poor; I ordered him the Strychnia as before.

19th. Feels much better; appetite a little better; says the medicine jerks his arms a little, and that it vomited him a little the first time he took it. I directed its continuance.

Oct. 7th. Disease returned in consequence of getting wet. I ordered him again fifteen grains of quinine and one sixth grain of morphia.

8th. No shake to-day. I ordered him two grains of Strychnia to be divided into sixteen papers, one to be taken after each meal until eight are taken, then two each day till the remaining eight are taken.

15th. Better than he has been since May last ; says he feels this time as if the ague had left, but that he felt before as if it would return again. Appetite good, and color improving. Three doses of the remedy cause him to have slight tetanic spasms, two do not at all effect him. I ordered him two grains more Strychnia, to be taken as by the last direction, but with an interval of four days between each grain.

I saw him a few days ago, though he has been labouring in all kinds of weather, and sometimes for hours in the water, he has not the slightest evidence of a relapse.

CASE 3. H. W. æt. 28, a carpenter, of regular habits, placed himself under my care on the 15th of September. He says that he has had remittent fever, by which he was confined to bed for six weeks, and since he has got up he is gaining no strength, but is rather losing the little that he had. For a while he had a voracious appetite, but eating did not appear to benefit him. He has now no appetite, and on the least exertion, even walking over the floor of his room, he feels as if he would never recover from the exhaustion. Bowels are loose ; abdomen tympanitic ; occasional watery stools, tinged with blood ; countenance sallow ; is much emaciated ; breathing quick, pulse 120 and small ; tongue deeply coated, with red tip and edges. Percussion gives a clear sound over the chest ; auscultation, the *bruit de souffle* in the carotids. He shakes every second day, about 10 o'clock, A. M., and the fever continues on him until about 4 o'clock, P. M. I ordered him to take one-twelfth of a grain of Strychnia after each meal.

17th. The only perceptible change is, that the fever lasted a shorter time, to-day, than usual. Strychnia to be continued.

19th. Feels a little better ; diarrhoea not so troublesome ; shake not quite so severe. Continue Strychnia.

22d. Is much better ; escaped one day without the shake, but had a chill that was not very marked, though some fever followed ; diarrhœa has nearly ceased ; appetite returning. Increase the dose of Strychnia to one-eighth of a grain.

30th. Had no chill or fever since the twenty-second ; diarrhœa disappeared entirely ; appetite pretty good. He was able to nail some boards on his garden fence, to-day, without much exhaustion. I directed him two grains more of Strychnia, one half to be taken in four days, and the remaining half in like manner, after an interval of four days more.

Oct. 18. Feels as well as ever he did.

CASE 4.—Mrs. T's. servant girl, æt. 16, sent to-day, Oct. 18, for some medicine for dysentery. I sent her of comp. syrup of Hæmatoxylon and Rheubarb, two ounces, of Hydrochlorate of morphia, two grains, mixed, with directions to take one teaspoonful three times a day, or oftener, if the pain and tenesmus were severe.

26th. She came to tell me that the dysentery had not been checked, although she had taken all the medicine. The mitigation of the pain, was all the benefit she experienced. She has chills and fevers every day ; appetite gone entirely ; has a great deal of pain in the abdomen, and severe headache every evening ; so much so, as nearly to blind her. I ordered her two grains of Strychnia to be divided into sixteen papers ; one, to be taken after each meal, until eight are taken ; then, two each day, until the remaining eight are taken.

Nov. 18th. Came to pay her bill, and says that the dysentery, chills and fever, stopped on the third day after she began to take the powders. She had no relapse.

CASE 5. O. B., emigrant, æt. 40, enjoyed excellent health until he arrived in Chicago. He put himself under my care on the 17th of November. He had the fever for the last six weeks. His disease began as remittent fever, and changed to intermittent. Has a shake every second day, which begins about two o'clock, P. M., when he is obliged to go to bed, and does not get warm until next morning.

Percussion gives a remarkably clear sound over the chest. Auscultation detects the *bruit de souffle* in the carotids. Has a bad cough, short and dry; complexion sallow to excess; cheek bones projecting; cheeks sunken; tongue thickly coated, white, with red tip, and edges; bowels irregular; epigastric tenderness; limbs attenuated. His anaemic condition led me, at first sight, to suppose the man a far advanced case of phthisis, and I was never as much disappointed as when the chest proved resonant, and remarkably so, throughout. But his extreme prostration, and the apparent total destruction of the function of nutrition, seemed to offer as little promise, as if his case had been, as at first, supposed. To satisfy him, I prescribed the Strychnia, with the hope that it might benefit him. I ordered him one-twelfth of a grain to be taken thrice, daily.

Dec. 1st. Is much better; cough has nearly ceased; has been clear from chill from the fourth day, until yesterday, when he got his feet a little wet and had a chill; appetite something better; the sense of taste which was destroyed, is, in a measure, returning. I directed him to increase the dose of Strychnia to one-eighth of a grain for each dose, and to continue as before.

15th. Continues growing better. I directed him to continue the Strychnia until two grains more are taken.

Jan. 1848. He has recovered entirely.

CASE 6. Mrs. O. B., æt. 34, wife of the man whose case is given above, had the fever at the same time as her husband. She applied to me on the same day. She has now rigors and fevers every second day; tongue coated white; bowels lax, with occasional severe diarrhoea; is much emaciated; appetite very poor; pulse irregular and quick; intermitting pain over the left eye. I directed for her, Strychnia, grain, one-eighth to be taken three times each day.

Nov. 20th. Rigors arrested, but the Strychnia was prescribed as before, to guard against a relapse. It was taken, in all, eight days.

CASE 7. Mrs. McM., æt. 48; a case of complication

with bronchitis, sent for me on December twenty-second. Her health has never been very good. She has been subject all her life to occasional attacks of bronchitis; sometimes, in the spring, particularly, to severe attacks. She has been confined to her bed now for two months. She has a very severe cough with copious expectoration of frothy mucous; respiration laborious; tongue, deeply coated, red edged; pain in epigastrium and left hypocondrium; bowels rather costive. Percussion gives a very clear sound over the chest. Auscultation, the respiration is distinct over the whole chest; but the bronchia are loaded with mucous. She has had a chill for nearly three months, which commences at about two o'clock, P. M., and continues for three or four hours, followed by fever and copious diaphoresis; sleeps scarcely any at all; has no appetite whatever, and is obliged to force herself to take any food; great thirst; is very much reduced in flesh and is scarcely able to move in bed; when she attempts to turn, the effort brings on palpitations that are very distressing. Has severe pain constantly over both eye-brows. I directed her two grains of quinine to be given three times each day.

23. Rested better last night; pain in the head better; chill lighter, to-day. I directed the quinine to be continued.

25th, A. M. Yesterday she felt quite well, comparatively; feels stronger; appetite no better; bowels still costive. I directed castor oil.

25th, P. M. Is much worse; pain in the head very severe; has had cold chills all day and cold perspirations; cough much more troublesome; expectoration more labored; the oil operated very well. I directed her one-twelfth grain of Strychnia, three times each day.

26th. Feels better; slept well last night; has no cold perspirations to-day; continue Strychnia.

28th. Better; continue Strychnia.

29th. Rested well last night; no chill yesterday at all; eat with some relish, a little gruel, yesterday. I directed the Strychnia to be increased to one-eighth of grain for each dose.

31st. Has been much better yesterday and to-day ; no chills ; yet the cold perspirations continued on the lower part of the body. The bronchial secretion has been gradually diminishing with the returning strength. Continue Strychnia.

January 11th, 1848. Has been able to set up during the past week ; her appearance much improved ; cough not so troublesome ; expectoration still diminishing gradually ; chills gone entirely, but the cold perspiration still a little troublesome. She eat a hard boiled egg yesterday, which caused her much annoyance. Directed her a dose of castor oil, and after its operation, nitrate of potash, four grains, to be taken four times each day until the perspiration ceases.

13th. Perspirations have ceased ; Strychnia resumed until two grains are taken.

17th. Still continues to grow better ; appetite good ; scarcely any cough or expectoration.

OBSERVATIONS.—The cases might be continued ; but as the others that I have entered in my case book, present the same general features with those here given, their notice is unnecessary. In the foregoing, I have been careful to observe the condition of the lungs : for in the four cases in which I tried the Strychnia, without any evident signs of benefit, there existed phthisis. Of these cases it is unnecessary to say more, than that the chills occurred every evening, and were not in the slightest perceptible degree, controlled by the remedy ; although, in one case, it was continued for three weeks, and I am, therefore, inclined to believe, that the *integrity of the lungs is necessary to the beneficial action of the Strychnia in the restoration of the function of nutrition and secretion.* Of the physiological action of the remedy I say nothing. I merely give the cases as they occurred, with the treatment and the result. Facts at this stage of the inquiry as to Strychnia, are what are wanted. That Strychnia possesses the power of arresting intermittent fever, is certain ; and that its effects are, though slower, more permanent than the effects of quinine, is equally certain. Besides, it possesses this great advantage over qui-

nine ; that while the quinine, in cases of deranged digestive function, as of case 5, would rather increase the difficulty, and surely not benefit, the Strychnia produced marked and permanent amelioration. I may be allowed to remark that, to me, the results here communicated were peculiarly satisfactory, for these were the very kind of cases that I and my medical brethren, in the district before mentioned, found most difficulty in managing.

I believe that Strychnia will take its rank as an adjuvant to quinine, in the treatment of fevers ; and, that, while the latter will be used, as now, to break up the paroxysms, the former will then take its place to perpetuate the cure, restoring the perverted nutrition or deranged secretion, the cause or consequence, as the case may be, of disease. I am satisfied that the Strychnia is, by no means, as dangerous a remedy as is generally supposed. Case three, took six and two-third grains, in twenty-three days. Case five, took eleven and one-eighth grains, in forty-one days ; and, case seven, took eight and a fourth grains in twenty-seven days. In all the cases the effects of the remedy were closely watched in order to observe the least symptom that might contra-indicate its use. It produced slight tetanic spasms in case one, and also slight vomiting when first given. In two cases the patients complained of vertigo. These were the only effects observed and they were not considered sufficient to require the Strychnia to be discontinued. It was always given in powder mixed with starch.

Quere? As both the cases, three and five, in which anæmia was present, in so marked a degree, were salivated profusely, during their treatment, might not this condition of anæmia have been caused or, at least, aggravated by the free and indiscriminate use of mercury ? We know that mercury will combine with the pepsin, thereby impairing, for a time, digestion ; and if a fresh portion of mercury be still added to neutralize each new portion of pepsin eliminated, we can easily see that it would be very easy to perpetuate its destructive effects upon digestion, and more particularly so, since the pathological tendency of the

disease itself is so strong in that direction. If such be the case, might not many physicians do better than to indiscriminately administer mercury in these fevers!

ARTICLE II.

LETTER FROM S. G. ARMOR, M. D.

NEW YORK, Feb. 8, 1848.

DR. BRAINARD:

Dear Sir,—In my last letter I gave you the chemical composition of the chloroform, an article recently introduced to the profession, and one which promises to be of much service in rendering patients insensible even to the most terrible surgical operations. It is extensively, but at the same time judiciously and cautiously used here, and, so far as I learn, with very satisfactory results. It appears to have entirely superceded the sulph. ether.

Another article, new to the profession generally, but of which you have doubtless seen an account in some of the recent journals, is the *gutta percha*. It has been recently introduced from Europe, chiefly as an article of trade, and is seized upon by the *surgical* portion of the profession here with great avidity. It is a substance somewhat analogous, in its physical properties and appearance, to gum elastic or India rubber, and is said to be admirably adapted to the treatment of certain forms of fracture, especially fractures of bones occurring near their articulations, such as the *condyles* of the humerus. It is well known that these are a class of fractures at all times difficult to manage. A leading indication in their treatment, being a flexed position of the arm, a dressing which can be easily removed and readily changed, in order that a different flexion and a sufficient amount of passive motion may be kept up from time to time, thereby preventing ankylosis of the joint, is, to say the least, a matter of great convenience. This substance would appear to answer this purpose in an eminent

degree, from the fact that it possesses the property, when heated for a few minutes in warm water, of entire *plasticity*; it can be readily moulded to any shape; and when cool, *preserves its shape*, forming a firm caste, yet sufficiently elastic to render it a comfortable and safe dressing. It is highly spoken of by the profession here who have tried it, and whose extensive experience in the treatment of fractures has rendered them familiar with the difficulties which are often encountered.

The Medical Colleges of the city have both very fair classes, although not much increased in numbers, if any, from last year. The University numbers some 400, and the College of Physicians and Surgeons about 190 or 200 students. Eastern medical schools do not appear to be increasing in the same ratio with those of the west. Advantages of instruction being equal, many western students prefer western institutions where medicine is *taught* as it is *practised*, and, indeed, so much do the peculiar epidemic fevers of the Mississippi valley become complicated with, and give character to many chronic diseases of the south and west, that it is not without *reason* students seek schools of medical instruction in that region. To one, familiar with the diseases which present themselves for clinical instruction, in the west and east, this is seen in a very striking view. While typhus and typhoid—pneumonia, phthisis, scrofula and syphilis, with all its loathsome concomitants, are constantly presented for instruction and treatment here; our quotidians, tertians and quartans—"hob-nail" livers and "ague-cake" of the west, with all their pathological relations, are rarely met with. Almost daily in attendance, at the City Hospital, since my arrival in the city, and at the clinics connected with each of the Medical Colleges, I have seen but *one* patient from the miasmatic regions of the west. He, by some means, found his way here from our State of Illinois, and such cases being rare, and constituting a pleasant variety for clinical instruction, he was jocosely presented to the class by the good natured Professor, as "one of the men we *read* about," and his dis-

ease, one of *secondary* character, was thought to be one of much interest, as originally growing out of an attack of fever, peculiar to the country, from which he came. For the general student of medicine, however, New York affords many advantages. The city and its environs, containing a population of almost half a million, with its crowded hospitals, infirmaries and dispensaries, furnish abundant opportunities for the acquisition of professional knowledge. Indeed, so far as relates to the unfortunate poor, who are thrown into these institutions of charity, New York may well claim a sad pre-eminence over all her neighboring cities.

I am pleased with the spirit manifested by the profession of New York. Perhaps at no time in the history of this Metropolis was medicine cultivated *as a science*, to the same extent it is at present. And this remark will, doubtless, apply to the profession, generally, of this country. It is *not true* that our science is *stationary*. At no time were more united and successful efforts made to advance the science of medicine. This advance is seen in the increased attention given to the study of *pathology*; the study of animal and organic chemistry, and therapeutical remedies, in their direct relations to *pathological conditions*; greater accuracy and precision in statement of *facts* from premises; a more varied scope of enquiry, and an *augmented spirit of original research*, with less reference to abstract and speculative theory. These things, faithfully and energetically carried out, must and will give stability and character to our medical literature.

Respectfully, yours,

S. G. ARMOR.

ARTICLE III.

We take the liberty of publishing the following extract from a private letter, dated Inlet Grove, Lee county, January 20, from our esteemed young friend Dr. Welch.—Ed.

“I have had a *curious*, and, perhaps, dangerous case, upon

which I should like your opinion. In the month of October, I was sent for to see a little girl, of seven years of age, who was said to be barking like a dog. I found her to be, to all appearance, in health, except that she had, every few minutes, a paroxysm of a peculiar ringing spasmodic cough, very difficult to describe, but as near as anything not unlike the rapid barking of a small dog. There was no pain, nor difficulty of breathing, nor expectoration, nor sense of oppression during or between the paroxysms; which occurred, perhaps, four or five times in the course of an hour, lasting not above a minute or two. An emetic relieved her for the time and thinking *malaria* might have something to do with it, gave quinine to an extent to produce nausea, whenever they should occur again. She gradually, for a time, got better under this treatment, but at length, in six or eight weeks they began to recur again with more severity, and my assistance was once more required. The cough had changed, somewhat, its character, being less ringing; and sometimes there would be scarcely any noise, but the mere pantomime of a cough. There was some oppression now during the cough, and sometimes she would have frequent vomiting without nausea. Blistered the back of the neck; gave assafoetida with camphor and ipecac and more quinine. Improved under this treatment for a time; but two weeks since became worse, and being sent for again, I examined the tonsils which were found to be much enlarged, injected and studded with a few white points. They seemed to be, besides, quite sensitive, a touch being enough to excite the spasmodic cough. I thought this enlargement might have something to do in producing the difficulty, and proposed that the glands should be removed, but as the parents would not consent, I substituted astringent gargles, and resorted again to assafoetida. The cough gradually left her under this plan, in the course of a week; but this being subdued, she began to have involuntary contractions of the muscles of the back, resembling St. Vitus' dance, and continuing about the same length of time with the previous paroxysms of coughing; the other muscles of

the body not seeming to participate in the convulsive movements. The child now ejected almost everything that she took into the stomach; but there was no nausea or unpleasant sensation at the time. She was, also, becoming considerably emaciated; I put her upon a course of carb. of iron, in doses of, perhaps, four to five grains, with assafoetida, when the paroxysms were most frequent. And as her meals were thrown up, I directed food to be given in small quantities at a time, often, and no more than could be easily retained. Under this course she has rapidly improved; the paroxysms being much less severe, and less frequent, her strength is improving and she no longer ejects her food, when given as directed.

I should value highly any remarks you may be pleased to make upon the above case. I should have mentioned, that the child has a light complexion, and is fair, and has always been well, save that she has sometimes, not very often, thrown up her food. The parents too, though not remarkably vigorous, cannot be considered unhealthy.

I will crave but another minute of your time, just to tell you how the women increase and multiply the population here. Last fall, a woman living in this vicinity, brought forth three living children at one birth; one died after a time, of disease, the other two are still living.

Day before yesterday, (20th,) I had just left the house where I had attended a case of childbirth, when I was called in another direction. The woman was but seven months advanced, and my advice was sought rather on the account of extreme anasarca of the legs and thighs, and great œdema of the labia pud., than in expectation of my services being needed obstetrically. She, however, was beginning to have premonitory symptoms of approaching labor, and I disposed myself accordingly; thinking the labia might suffer injury from the passing of the child, I made a number of small punctures with a lancet in each, by which the swelling was reduced, and a large quantity of serum evacuated during the course of the labor. The abdomen was enormously enlarged, and the labor was slow, lasting some

twenty-four hours. It had been apparently near its termination for several hours, when two foetuses, in appearance of about six months growth, were suddenly expelled. One was in a state of incipient putrefaction, and the other, barely showed signs of life. Soon after, in searching for the after-birth, my fingers met a very large watery cyst, which as contractions proceeded, was soon ruptured, and an apparently seven months foetus was delivered by the feet. It was inanimate and there was no pulsation in the cord; but artificial respiration being instituted, it was after a time resuscitated.

Making still another examination after the lapse of a few minutes, the head of a *fourth* child was found to be rapidly advancing, and it was soon in this vale of tears. (I had to laugh when the woman asked me if I thought that was the last one.) It was more vigorous than the other, and the cord pulsated strongly. The two double placentæ were then extricated; the last adhering, slightly, it being necessary to detach it carefully with the fingers.

There was some hemorrhage but it was speedily arrested, and the woman was "comfortable and happy" when I left her yesterday.

The two first born were girls, the two last boys.

Respectfully, yours,

W. W. WELCH.

To Dr. Brainard,
Chicago, Ill.

ARTICLE IV.

Remarks in relation to the Pathological Anatomy of the mucous membrane of the intestinal canal during infancy. By Drs. FRIEDLEBEN and FLESCH, of Frankfort on the Main. From HENLE's and Professor LIETSCHT's v. 3, 1846—1847. Translated from the German, for this Journal, by DANIEL STAHL, M. D., of Quincy, Illinois.

Normal condition of the intestinal mucous membrane in the first period of life.—It is constantly covered with a thin layer

(from the fecal matters,) of whitish or yellowish, mucous; a somewhat thicker layer leads us to suspect a morbid change. The mucous suffers no change of colour, from the morbid changes of the tissues, (except accidentally from medicine, &c., &c.) This layer of mucus, if it is very thin, and the parieties of the intestines atrophic and anæmic, can easily be taken for the mucous membrane itself. The colour of the mucous membrane is, in its natural condition, sometimes yellowish, at others grayish-white; changes can take place by imbibition of bile, medicines, blood, and by putrefaction. The folds in the small and large intestinal canal are present, even in the youngest subjects. The adhesion of the mucous membrane with the other membranes is very strong, excepting in the colon, where it is a little loose. The consistence is always very firm, so that the mucous membrane can never be removed by scraping with the back of a knife. The solitar-glands (isolated glands, I suppose—transl.) of the small intestines are not, in a normal condition, visible; neither are those of the large intestines in the natural condition; yet small, roundish, opaque points, which, however, are not prominent, are frequently seen. *Lieberkuehn's glands* cannot be seen with the naked eye, except in rare instances, in the form of small depressions. *Peyer's patches* are, even in early life, visible; their number changes from thirty-six, to sixteen, and even to six; the largest are near the valve of the coecum; they are smaller towards the upper part. Their form is elliptical, (from 4''' to 1½" length, and 2''' to 4''' breadth.) Those on the ilium are well circumscribed. These glandular patches, can in the healthy subject, only be seen (with the exception of those near the valve,) by holding the gut against the light; they will then show themselves as opaque spots. Their easy visibility is a sign that they are morbidly affected. Their colour is in a healthy condition, either not at all, or only by a slightly grey colouring, distinguished from that of the mucous membrane; there are never to be seen vascular arborisations upon them. The arcolar structure of these glands is very early present.

The pathological condition of the intestinal mucous membrane of infants, (children in the first year,) in *atrophy* and *diarrhœa*, is according to the author's observations, the following :

A. CONGESTION.

A. Congestion of the mucous membrane itself ; a rose or cherry colored, (never livid or violet,) redness, (*rosige oder kirschrothe roethe*,) which occupies large spaces of the mucous membrane, which, at times, extends to the size of 1 to 2", especially in the small intestines ; at others, and oftener, it is confined to small spots or folds ; and, at other times, again, it has the form of the aborizing branch of a blood-vessel. This redness extends, also, over the normal tissue of Peyer's patches, with the congestion, the adhesion of the mucous membrane with the serous, is very much diminished, but the consistence of the former is normal. The isolated glands are not visible as is the case in health.* The congestion exists alone or in connection with inflammation of other parts of the mucous membrane, or that of its glands. This congestion is obviously a morbid increase, (*Steigerung*,) of the physiological condition ; the diminished adhesion is in consequence of the increased amount of fluid in the submucous cellular tissue.

B. Congestion of Peyer's patches.—These are more easily visible, partly on account of their more areolar structure, partly on account of their partial (confined to isolated spots on the same) redness, whilst the rest of the mucous membrane is of the natural color. At the same time, the isolated glands, in the small and large intestines, are plainer to be seen, without, however, overreaching the level of the mucous membrane. This change, is certainly one of the most frequent causes of the transitory *diarrhœa*, which lasts but a short time, and occurs so frequently, even in strong children, especially during the process of teething.

*This seems to contradict the description of the normal condition of the glands.

Query.—Wherein consists the difference, (if there is any,) between Lieberkuen's and the isolated glands?—Translator.

B. ACUTE INFLAMMATION.

A. It occurs in *acute erythematic inflammation*, but the authors have seen it, only, occupying small surfaces, and accompanied by severe diseases of other parts connected with the mucous membrane. Nor has it ever occurred in any considerable degree, in the isolated glands; but always either as a subordinate affection, with other severe diseases, or as an ulcerative inflammation.

B. *Primary acute inflammation of Peyer's glands*, is one of the most important, and not a rare disease of infancy. A more or less considerable number of the patches (generally ten or twelve, never all,) and not exclusively near the coecum, show a remarkable even cherry colored redness, and considerable puffing, and thereby a prominence above the mucous membrane. The redness is, on some, equally extended; on others, especially on those in which the disease has just commenced, in spots, here and there, occupying only the edges. The puffing out is a constant symptom, and shows itself from the single bold-relief to the genuine granulated appearance. In the latter case, the patch has the appearance as if it were laid in with innumerable small red grains. The consistence, especially of those most puffed up, is diminished, and the tissue, after an incision, is easily scraped off with the back of a knife. The redness, puffiness and diminished consistence commence always, gradually, at first confined to small spots of single patches; then come generally, diseased patches closer together, but between two diseased ones, are found such as are either sound, or only congestive. Often the patches thus diseased, are visible through the serous membrane, from without, and sometimes such places are indicated by great injection of the latter membrane. The Peyer patches thus reddened, and puffed, contrast greatly with the surrounding normal or slightly erythematic muc. mem. The isolated glands are either normal, or there are but few diseased. The mesenteric glands are mostly enlarged, a little injected, but of firmer consistence.

C. *Secondary acute inflammation of Peyer's glands*.—The

authors have found this inflammation only with tubercles; analogous to it, is the inflammation of the same organ in eruptive fevers, especially in scarlet. Its peculiarity consists in the circumstance that in consequence of its dependence on a disease of the skin, the inflammation does not appear so pure, and is more easily complicated, than in the primary form. Besides, in another principal affection, more or less numerous glandular plexus, manifest themselves, either uniformly, or in separate patches, deeply red, puffed, and in places even ulcerated. Also ulcerative inflammation of the isolated follicles of the small intestine, and simple development of the isolated glands of the large.

C. CHRONIC INFLAMMATION OF PEYER'S GLANDS.

This is the most frequent cause of the atrophy and marasmus, (abzehrung,) of the infant. Its anatomical character, is as follows: several glandular tissues show a coloring, which is, sometimes, entirely gray-blue, and sometimes, more slate-gray; and this contrasts much with the other, mostly pale mucous membrane, which latter, however, can, in but rare instances, in consequence of chronic inflammation, in places, be colored livid-gray. These deceased patches are much more visible than the healthy ones. Their areolar structure is effaced, the edges are sharply limited, with black points thereon. Sometimes their tissue is very thin, at others, there is some puffiness, according to the stage in which death takes place. *This chronic inflammation of Peyer's glands*, exists either, (and mostly,) alone, or there are, also, as a local complication, traces of inflammation in the mucous membrane, or in the isolated glands. The mesenteric glands, are never essentially changed. There are never complications with tubercles; but there is a great disposition to complication with other organs. (Pneumonia lobularis, hydrocephalus, &c., &c.)

D. EXULCERATION OF THE ISOLATED GLANDS.

A. Primary exulceration.—The proper primary inflammatory swelling, and exulceration of the isolated glands, is, upon the whole, a proportionably rare occurrence, whilst a swelling of the same, without inflammation, (so that they

appear upon the mucous membrane, as small, whitish bodies, of the size of a pin-head, or millet-seed,) takes place frequently in all other affections of the intestinal mucous membrane and its annexæ. The ulcerative inflammation of the isolated glands, constitutes, like the chronic inflammation of Peyer's glands, but more rarely the anatomical foundations of atrophy. Its characteristics are the following: a more or less extensive surface of the mucous membrane of the ilium is coated with small round ulcers of the size of a millet-seed, or lentil, answering to that of the isolated glands. They are, sometimes, isolated and scattered, at others, in patches, or two or three run into each other. They are not perceptible on the outside of the gut. There are no tubercles either on the ulcerated surface, nor on any other part. The isolated glands of the colon, Peyer's and the mesentric glands, remain either healthy, or are not essentially effected.

B. Secondary exulceration.—This is, in part, a manifestation of tubercles, and appears as such, frequently, with the secondary inflammation of Peyer's glands. The morbid changes of the isolated and Peyer's glands, in this case, resembles much, those which we, under similar circumstances, find in tuberculosis adutorum; yet in the latter there is often a perceptible deposition of tubercular substance at the bottom of the ulcer, and externally on the gut, which in children, is not the case. The anatomical characters are the same as in the primary exulceration, with this difference, that the exulcerated glands are surrounded by a strong, inflammatory halo. At the same time disease of Peyer's glands appear always to take place, and both are dependant on the presence of tubercular affections.

E. SOFTENING OF THE INTESTINAL MUCOUS MEMBRANE.

This is a frequent post-mortem appearance, and its character is of that kind, as not to admit of doubts, such as have been raised about the softening of the stomach, we can distinguish two varieties.

A. Red softening of the intestinal mucous membrane: a space of the mucous membrane, mostly of the small intestines, of

more or less extent, has lost its consistence in such a degree, that it can easily be scraped off with the back of a knife. Its color is on its larger surface normal, only on a few small, but connected spots, is seen a rosy tint which cannot be scraped off; there is, withal, a diminished adhesion even in places where there is no decrease of consistence. The tissue of the mucous membrane is frequently infiltrated, as if with serum, or as if changed into a homogenous jelly. In such places the texture of the mucous membrane cannot be recognized. The walls of the intestinal canal are, in such places, easily torn. The changes which at the same time take place in the isolated glands, Peyer's patches and mesenteric glands, are of inferior importance.

B. White softening of the intestinal mucous membrane.—The anatomical character is the same as in the red softening, only the mucous membrane, (like the whole wall of the gut,) is distinguished by a remarkable paleness according as the muc. mem. is simply softened, or more gelatinous, (more succulent) do we find the mass, removed with the back of a knife, and which is the residue of the mucous membrane, more or less voluminous. Here, also, is always diminished adhesion. This white softening occupies larger spaces than the red, obviously, in consequence of its longer existence. Peyer's patches are, without any other change, more easily perceptible, probably, because of the greater paleness of the mucous membrane. This white softening, always of a chronic character is, also, one of the post-mortem appearances in cases of atrophy in children. The gradual transition of the red, into the white softening, and the analogous appearances in other organs (e. g. in the brain) proves, that the starting point of this white softening is an inflammatory condition of the tissue of the mucous membrane.

The authors now think themselves justified in the following *resumé*: 1. The changes of the intestinal mucous membrane are frequent, perhaps the most frequent, post-mortem appearances of the infant age. 2. These changes are partly the chronic, (the principal foundation of atrophy,) partly the acute (the conditional causes of the acute, very exhaus-

ting diarrhœa, which is often accompanied by cerebral affections and of many diagnosticated diseases, as softening of stomach. 3. These changes are in the same proportion frequent post-mortem appearances in the above mentioned conditions, as the most of those generally enumerated, are rare (such as enlargement of the mesenteric glands, softening of the stomach, aphthæ, &c., &c.) 4. These changes, likewise, are much more frequent than those of the stomach, which latter are, with the exception of the softening of the cul-de-sac, comparatively rare in infancy. 5. The changes in the mucous membrane, except the secondary ones, are in cadavers mostly separate. 6. The most frequent of all changes, is the chronic inflammation of Peyer's glands; this is also the most frequent anatomical foundation of the atrophy of children. 7. Next to this, but not more rarely, occurs the red and white softening as the cause of atrophy. 8. These softenings are but different stages of the same process; the simple and gelatinous softening, but different forms. 9. A more rare post-mortem appearance is the chronic exulceration of the isolated glands of the small intestines. 10. A disease, as yet, never appreciated, and very dangerous, is the acute inflammation of Peyer's glands. 11. This disease is a true phlogosis, as is also evident from its concomitant diseases, (croup, pneumonia.) 12. Most of authors don't know this disease, and the few who have seen its changes, confound it with dothinen-toritis, which does not occur in the first year of life. 13. The secondary acute inflammation of Peyer's glands and inflammation of the isolated glands, which exist mostly at the same time, form part of the tuberculous disease. The authors have always, in this case, found tubercles in the spleen, never in the intestines. 14. The authors have often observed the colitis of the French, but always confined to small spaces, and obviously as a slight affection in comparison to the other changes in the mucous membrane of the small intestine, which existed at the same time. 15. The mesenteric glands show themselves, except trifling redness and enlargement, in some cases, in a normal condi-

tion, their affection is never severe. Only in a general tubercular affection are they often partially infiltrated with tuberculous deposition. 16. The peculiarity and frequency of the above mentioned changes of the intestinal mucous membrane, on the one hand, and the rare occurrence of many diseases, already so important, in the second year (typhus, intestinal, tubercles) on the other, form one of the most prominent characteristics of the pathology of the intestinal mucous membrane in the age of infancy.

REMARK OF THE TRANSLATOR.—In order to transmit accurately the anatomical and pathological descriptions, I have preferred, in many places, a *verbal translation*, if it would convey the authors meaning plainly, to a *smoother style*, that might give room to ambiguity. I hope this remark will be received, in part at least, as an apology for the stiffness, &c., &c., of the style of this paper.

II.

Bonnet, Chirurg des Hôtel-Dieu at Lyon, communicates in the Gazette de Paris, numbers 15, 16, and 18, 1843, in a long article, his experience and observations in relation to *cauterization as a preventive of phlebitis and of the absorption of pus*. He says, 1st. That superficial veins can be opened and destroyed with kali caustic, caustic vien, and zinc muriat., without producing suppurative phlebitis. 2d. Has phlebitis occurred in consequence of a simple or poisoned wound, then is cauterization with the hot iron a powerful remedy to stay the phlebitis in its progress. 3d and 4th. Hemorrhoidal, and other tumors, can also be safely destroyed by cauterization. 5th. The destruction of the whole inner surface of large abscesses with a hot iron or zinc. mer. prevents all bad consequences, which may follow the opening of large abscesses; cauterization can even stay these consequences.

ARTICLE V.

Report of Cases treated in the Dispensary of Cook County Hospital, from September, 1847, to January, 1848. By J. H. BIRD, M. D., attending Physician.

Amaurosis, - - -	1	Hernia, - - -	2
Amenorrhœa, - - -	4	Infantile Remittent, -	6
Asthma, - - -	2	Leucorrhœa, - - -	2
Bronchitis, - - -	13	Menorrhagia, - - -	1
Corneitis - - -	1	Neuralgia, - - -	3
Conjunctivitis - - -	3	Pertussis, - - -	1
Constipation, - - -	8	Pleurisy, - - -	1
Dentition, - - -	3	Porrigio, - - -	6
Dilatation of Bronchi, 1		Remittent Fever, -	23
Diarrhœa, - - -	20	Rheumatism, - - -	2
Dropsy, - - -	1	Sarsocele, - - -	1
Dysentery, - - -	4	Scabies, - - -	1
Dysmenorrhœa, - - -	2	Scrofula, - - -	4
Gravel, - - -	1	Syphilis primary, -	1
Intermittent Fever.		“ Tertiary, -	1
Tertian - - -	65	Synovial Infl. - - -	1
Quotidian, - - -	45	Typhoid Fever, - - -	6
	110	Worms, - - -	5
	<hr/>		<hr/>
	174		72
			<hr/>
			174
			<hr/>
			246

Intermittents were treated with quinine, salacine, cinchonine, singly, and in combination with the prussiate of iron. Quinine and Salacine combined, in the proportion of one part of the former to three of the latter, was administered with success in some cases. Strychnia was given in several cases, with less satisfactory results, than when administered for spring intermittents.

In cases accompanied with derangement of the stomach, salacine and cinchonine more effectually arrested the paroxysm than did quinine. Cinchonine was introduced and prescribed, during the last two months specified above. In doses similar to quinine it was quite as prompt in arresting the paroxysm. Being nearly tasteless, and less irritating than quinine, to the stomach, it is to be preferred, in

many cases, where the latter, from its bitter taste and irritating qualities, would be rejected.

It has been given with quite as satisfactory results in the remittent fevers, that have been treated during the short period of its trial; also, in several cases of the diarrhoea, premonitory to an attack of fever. From the success that has been met with in its use, and from its being less expensive than quinine, (at two-thirds the cost,) it is a very desirable remedy in the treatment of miasmatic diseases.

The cases of remittent fever were generally free from complication; when occurring, they were then treated in the usual manner, according to the complication. The treatment, generally adopted, was a combination of quinine or cinchonine with opium, sometimes with the addition of ipecac, as the appearance of the tongue might indicate, following the operation of a mild cathartic.

The cases of typhoid fever were treated in a similar manner to remittants, by the use of quinine and opium, with the exception, that opium was administered in much larger doses and more frequently, together with a free use of stimulants.

Nitric acid drink was prescribed, both in this and remittent fever, where indicated by the character of evacuations, and, also, during convalescence.

In the cases of asthma, the severe dyspnoea was greatly relieved by the inhalation of sulphuric ether. The patients not reporting themselves, the results of its administration were not ascertained.

Chicago, Feb. 28, 1848.

ARTICLE VI.

Aneurismal Varix of the popliteal space—ligature of the artery and vein. Hemorrhage, amputation, recovery. By DANIEL BRAINARD, M. D., Professor of Surgery in Rush Medical College, Surgeon to the Chicago Hospital, &c.
 Enoch Kandall, æt. 21 years, had, in the month of June,

1842, a knife thrust into the popliteal space about two inches above the knee, and one inch within the outer hamstring. The cut bled profusely at the time, but the hemorrhage was stopped by compresses and a bandage, and the wound adhered by first intention. At the end of about four weeks he began to feel a "fluttering," on placing his hand upon the part, which gradually increased. At the end of six months, he perceived a tumefaction of the part, and at the same time noticed that the veins were enlarged over the whole member.

In August, 1845, he had a slight scratch on the leg, which ulcerated; and this never healing, nearly the whole surface of the leg became ulcerated. He continued to labor until about a year since, when he was compelled to stop work.

January 24, 1848, it presented the following appearances:

There was a tumor filling the popliteal space and rising above its surface, encroaching upon the inner condyle of the femur. It gradually diminished as it extended upward and inwards till it disappeared about the middle of the thigh, and in like manner extended downward till it was lost in the calf of the leg, being circumscribed or having perceptible limits on the outer and inner sides. The color of the skin was natural; it was soft, elastic, fluctuating, gave a strong vibratory sensation to the touch, and pulsated strongly. It could be, in a great measure, removed by pressure, and diminished in size on raising the member or compressing the femoral artery. The veins over the whole limb, both capillaries and trunks, were greatly enlarged, and upon the inside of the leg was a varicose enlargement of the size of half an egg, which in common with the trunks pulsated strongly.

The young man's health was in other respects pretty good. He had been subject to intermittent fever, but had never experienced, so far as could be discovered by questions, any derangement of the functions resulting from the mingling together of the arterial and venous blood. He

was subject to hemorrhage, and had, several times during his life, nearly died of epistaxis.

The ligature of the artery was performed in presence of the class at the Medical College, Wednesday, January 26, 1848, as follows: The femoral artery being compressed where it passes over the pubis, and the member raised so as to allow the blood to flow out of it, a tourniquet was applied upon the thigh, about the middle, so as perfectly to interrupt the circulation. An incision was then made vertically over the middle of the popliteal space, about four inches in length. The sac being opened by this, a gush of blood, judged to be about eight ounces, took place, but in a few seconds the flow entirely ceased. Wiping out the sac with a sponge, a state of things very different from that usually described as constituting aneurismal varix, was found; instead of finding the sac constituted by the enlarged vein, as is sometimes the case, or being situated between the artery and vein, with an opening into each, as has been found in other cases, there was a common cavity into which all the arteries and veins seemed to open, both above, below, and around; the popliteal artery and vein, as they entered from above, being gradually enlarged for some distance, and a similar diminution taking place as they passed from the sac.

The branches of the popliteal artery were also enlarged where they opened into the sac; at least five orifices were seen there sufficiently large to admit a common sized silver catheter a short distance within them.

Owing to this gradual enlargement of the artery, it was necessary to enlarge the wound upward about two inches, when the trunk being found about two or three times its natural size, it was tied with the vein. The wound was then enlarged downward about an inch, and the artery greatly increased in size but with its coats thin like those of a vein, was, with the vein, also secured. The separating and securing these trunks was a thing of great difficulty, and was effected by passing a silver catheter into them, and raising them from their situations as far as could

be done. Having thus secured the vessels above and below, the tourniquet was loosened and for about two minutes no hemorrhage took place, but at length the blood returned in a full current and gushed out of the wound. The hemorrhage was arrested by tightening the tourniquet, and it was then determined to dissect up the sac and pass a ligature around it. This was carefully done, and when completed, the tumor formed by the sac, of the size of a hickory nut, was seen at the bottom of the wound. On again loosening the tourniquet it gradually filled with blood, but did not pulsate. Stitches and adhesive straps were then applied to retain the lips of the wound in contact, and a roller applied from the toes to the upper part of the thigh as tightly, as could well be borne, with compresses over the wound. The tourniquet was then placed loosely upon the thigh, to be tightened in case of necessity, and the patient carried to his lodgings, and placed in bed.

He supported the operation with great fortitude, and although it was long, he was not much depressed when it was finished. There was neither pain nor coldness of the member. In the evening gr. x. of Dover's powder was given.

January 27—Morning. Has slept well ; pulse 100 and strong ; no pain ; gave a cathartic of inf. of senna. Evening : Cathartic operated well ; pulse 110 ; ordered v. s. to 18 oz. with gr. x. of pulv. Doveri.

28. Has slept well ; pulse 120 ; some heat of limb with oozing of serum from the wound. Ordered nit. pot. gr. v. with ant. tart. $\frac{1}{4}$ gr. every two hours, with evaporating lotions to the member. Evening : Gave the Dover's powder.

29. Has rested well ; pulse 120 ; pain and tension in limb ; roller and compresses removed and re-applied ; treatment continued.

30. Has rested well, and has no pain ; pulse 100 ; swelling subsided ; slight discharging of puriform matter from wound. Nitre and tart. ant. discontinued ; corn meal gruel allowed for diet, and sul. mag. \mathfrak{z} i. was administered. Even-

ing: Salts operated well; gave Dover's powder and resumed the aut. tart. and nit. potash.

31.—Morning. Has slept pretty well; the oozing of serum commences to be yellowish from pus; pulse 110.

At three o'clock P. M., five days after the operation, while the patient was lying perfectly quiet in the bed, a profuse hemorrhage took place from the wound and before it could be arrested thirty ounces of blood were lost; by tightening the tourniquet the bleeding was arrested. On arriving I found him much exhausted. Being desirous of ascertaining the source of the hemorrhage, I loosened the tourniquet, and for a short time no bleeding took place, but at the end of about thirty seconds it commenced in a large, uniform stream of dark colored blood, which was not arrested by compressing the femoral artery at the pubis. This at once showed that the source of the hemorrhage was the sac, and that it was venous in its character. It also showed that amputation was the only remedy for the ligature of the branches entering the sac was impossible, and the principal ones were tied both above and below.

This was accordingly done by the circular method about the middle of the thigh. The fortitude of the patient was great, but the vital powers of the system were much depressed and required stimuli which were freely given.

Feb. 1. Has slept well; pulse 130; no pain; allowed gruel and demulcant drinks, an anodyne at evening.

He continued to go on very well until the 11th February, when as he was lying quietly in bed, a considerable hemorrhage occurred from the stump. On arriving, I found that this had been arrested by compressing the femoral artery, and as it did not return on removing the pressure, a tight roller with compresses and evaporating lotions were applied to the stump, and full doses of acet. of lead and opium given internally. The hemorrhage did not return, and at the present time, March 8, the stump is almost cicatrized.

It may be added that in proportion as the circulation in the member diminished in activity, the tissues shrunk away

so as to leave the bone too prominent; and in order to prevent the inconveniences of a conical stump, about two inches of it was removed.

On examining the limb it was found that the artery and vein, both above and below, had been perfectly included in the ligature, but in consequence of the great increase of the collateral branches, there was no coagulum in the femoral artery above the ligature. It was greatly enlarged and tortuous. The vein was greatly enlarged and thick, and full of coagulum. The coats of the artery below the aneurismal were thin like those of a vein, and the vein itself was greatly enlarged, forming sacs of the size of an egg; both artery and vein were filled with coagulum. The ligature of the sac had cut through and offered a large opening from which the blood came. There was no coagulum in the sac, the venous circulation having been actively kept up through it. The mouths opening upon its internal surface were found to be veins.

PART II.—REVIEWS.

ARTICLE VII.

Physiological Anatomy and Physiology of Man, with numerous original illustrations. By B. R. TODD, M. D., F. R. S., and W. BOWMAN, F. R. S., of King's College, London. To be completed in four parts, forming two volumes.

This most excellent work now being re-printed in this country, by the enterprising publishers, Lea & Blanchard, affords to the practitioner and student of medicine the best, if not the only means, of becoming acquainted with the numerous and important advances which have been made during the last five years, in general anatomy and physiology.

It is highly creditable to the authors of this work, that, to the exclusion of theory and speculation, known anatomical facts, many of which are the fruits of their own careful and laborious investigations in microscopic anatomy, are made to serve as the foundations for most of their physiological deductions.

"The study of anatomy," say they, "must always accompany that of physiology, on the principle that we must understand the construction of a machine before we can comprehend the way in which it works. The history of physiology shows that it made no advance until the progress of anatomical knowledge had unfolded the structure of the body. There is so much obvious mechanical design in the intimate structure of the various textures and organs that the discovery of that structure opens the most direct road to the determination of their uses."

The course pursued throughout the work is strictly in accordance with this view. A full description of the minute structure, constitution, and development of an organ or tissue, precedes, always, and is made the basis of conclusions with regard to its functions; physiological views of their own, and of others, are fairly and candidly given, but none are recommended as worthy of being received

and adopted, excepting such as are strictly in accordance with anatomical facts.

By pursuing such a course, (in our opinion the only proper one,) much additional information, both with regard to structure and functions of the animal organization, has been acquired, errors have been detected, and plausible theoretical views, not based on facts, have been made to appear less attractive.

The first eight chapters of the work treat of motion, and afford ample evidence of the ability of the authors to do justice to any subject.

It is well known to our readers that a few years since it was discovered that nearly all fluids contained moving particles, and that these were described, by several observers, as living animals, liable to be slain by thousands, whenever a man saw fit to quench his thirst with a glass of cold water.

The following quotation may serve to enlighten the credulous, and to quiet the consciences of the humane :

“The term *molecular motion* was used many years ago by Mr. Robert Brown, to denote a phenomenon which he had witnessed in the particles of various organic and inorganic substances in a state of extremely minute subdivision. When these particles were suspended in water, they exhibited, under the microscope, motions, which consisted in more or less rapid oscillations and rotations of the particles themselves. He found them in the pollen of plants, in many mineral and metallic substances, in various animal matters, reduced to a subtle powder, consisting of particles that ranged in diameter between the 1-15000th and 1-30000th of an inch. The movements are clearly not peculiar to living or organic parts, for they occur in inanimate ones: they never occur excepting when the particles are suspended in water, or some liquid; and they are attributable to currents produced in the fluid by evaporation at its surface or edges, for they may be arrested by covering the fluid with oil, or using other means to prevent such evaporation. They are not, therefore, inherent in the particles themselves, which only obey the impulse communicated to them by the currents created in the fluid which holds them in suspension.”

On cilia and the cause of ciliary motion our authors make the following remarks :

"Certain surfaces, which are, in their natural and healthy state, lubricated by fluid, are covered with a multitude of hair-like processes, of extreme delicacy of structure and minuteness of size. These are called *cilia*, from *cilium*, an eyelash. They are generally conical in shape, being attached by their bases to the epithelium that covers the surface on which they play, and tapering gradually to a point ; or, as Purkinje and Valentin state, they are more or less flattened processes, of which the free extremities are rounded ; and this latter form prevails in the human subject.

They vary in length from the 1-1000 to the 1-12000 of an inch. They are disposed in rows, and are adapted in their arrangement to the shape and extent of the surface to which they belong ; they adhere to the edges, or to a portion of the surface, of the particles, of the epithelium, preferring the columnar variety of them.

During life, and for a certain period after death, these filaments exhibit a remarkable movement of a fanning or a lashing kind, so that each cilium bends rapidly in one direction, and returns again to the quiescent state. The motion, when viewed under a high magnifying power, is singularly beautiful, presenting an appearance somewhat resembling that of a field of corn agitated by a steady breeze. Any minute objects coming in contact with the free extremities of the cilia are hurried rapidly along in the direction of the predominant movement ; one or more blood-discs, accidentally present, will sometimes pass rapidly across the field, propelled in this way, and very minute particles of powdered charcoal may be conveniently used to exhibit this phenomenon, and to indicate the direction of the movement. The action of the cilia produces a current in the surrounding fluid, the direction of which is shown by the course which the propelled particles take.

An easy way to observe this phenomenon is to detach by scraping with a knife a few scales of epithelium from the back of the throat of a living frog. These, moistened with water, or serum, will continue to exhibit the movement of their adherent cilia for a very considerable time, provided the piece be kept duly moistened. On one occasion we observed a piece prepared in this way exhibit motion for seventeen hours ; and it would probably have continued doing so for a longer time, had not the moisture around it evaporated. However, Purkinje and Valentin have ob-

served it to last for a much longer time than this in connection with the body of the animal. In the turtle, after death by decapitation, they found it lasted, in the mouth, nine days ; in the trachea and the lungs, thirteen days ; and, in the œsophagus, nineteen days. In frogs, from which the brain had been removed, it lasted from four to five days. The longest time they observed it to continue in man and mammalia was two days ; but in general it did not last nearly so long. What appears to be immediately necessary to the continuation of the movement, is the integrity of the epithelial cells to which the cilia adhere ; for as soon as these shrink up for want of moisture, or become physically altered by chemical reagents or by the progress of putrefaction, the cilia immediately cease to play.

From these facts we learn two important points in connection with this phenomenon. The first is, the truly molecular character of the movement. Whatever be the immediate cause of the action of the cilia, it is evidently intimately connected with the minute epithelial particles to which they are attached ; for cilia never exist in man and the higher animals without epithelial particles, and these particles have no organic connection with the subjacent textures, excepting such as may arise from simple adhesion. And, secondly, we perceive, that this movement is independent of both the vascular and the nervous systems, for it will continue to manifest itself for many hours in a single particle isolated from the rest of the system. After death it remains longer than the contractility of muscle ; a circumstance which, together with the facts just mentioned, indicates that the cilia cannot be moved by little muscles inserted into their bases, as some have supposed. And experiment also shows this independence. If the abdominal aorta be tied, the muscles of the lower extremities will be paralyzed in consequence of their being deprived of their blood ; and on removing the ligature, and allowing the blood to flow, the muscles will recover themselves. But a ciliated surface is not affected at all in its movements, though the supply of blood to the subjacent tissues be completely cut off. Again, hydrocyanic acid, opium, strychnia, belladonna, substances which exert a powerful effect on the nervous system, produce no influence upon ciliary motion. In the bodies of animals killed by these poisons, the phenomenon is still conspicuous ; and even the local application of them does not hinder it, provided the solutions do not injure the epithelial texture. Shocks of electricity

passed through the ciliated parts, do not affect the movement. Lastly, the removal of the brain and spinal cord in frogs, by which all muscular movements are destroyed, does not stop the action of the cilia. This striking fact may likewise be adduced to disprove the supposition, that these movements result from the action of minute muscles; for, although muscles may be excited to contract without nerves, we have no instances in the higher animals in which they habitually act without the interference of the nervous system; nor is it likely that a movement existing over so extended a surface, as that by the cilia, would, if effected by muscles, be independent of nervous influence.

What is the cause of ciliary motion? We have shown it to be independent of the blood and of the nerves, and to resist those depressing causes which usually put a stop to the action of contractile tissue. It requires for its continuance three conditions: a perfect epithelium cell; moisture, not of too great density; and a temperature within certain limits. From Schwann's observations it appears that cells exhibit a power of endosmose; that a chemical change occurs in the fluids in contact with them; and that a movement of their internal granules may be seen under certain circumstances. If ciliated epithelium cells exert an attraction of endosmose upon the surrounding fluid, may not this physical phenomenon afford a clue to determine the cause of the movement."

The recently developed facts concerning the structure of bones, and especially with regard to the manner in which their nutrition is provided for, are among the most interesting.

The vascular membranes to which the blood vessels for the nutrition of bone are distributed, are the periosteum upon the surface, the medullary membrane lining the large cavities, and the reflections from both of these, into the Haversian canals. Intervening between these membranes and the surfaces, both external and internal, with which they lie in contact is found a layer of nucleated cells with a basement membrane, by means of which the nutritious material is withdrawn from the capillaries, and transmitted to the bony structure composed of granules and a beautiful system of pores and cavities, described in the following extract:

"The most interesting points in the minute anatomy of bone relate to the mode in which nutrition is provided for in those parts not in immediate contact with the blood-vessels. We have already seen that considerable masses of cartilage derive their nutriment from vessels placed on their exterior only, apparently by a kind of imbibition, perhaps aided by the presence of the nucleated cells, and by a more or less fibrous texture: but bone, which is of a far harder and denser nature, is unable to imbibe its nourishment so easily. Hence its surface is greatly augmented by the arrangements already detailed; and, in addition to this, the osseous tissue itself is provided with a special system of microscopic cavities and canaliculi, or pores, by which its recesses may be irrigated, to a degree of minuteness greatly exceeding what could have been effected by blood-vessels alone, consistently with the compactness and density required in the tissue. The study of this delicate apparatus will now demand attention, but a few words must be premised on the ultimate structure of the *osseous tissue*.

It appears from the researches of Mr. Tones, about to be published in the Cyclopædia of Anatomy, that the ultimate structure of the osseous tissue is *granular*. The granules of bone are often very distinctly visible, without any artificial preparation, in the substance of the delicate spiculæ of the cancelli, viewed with a high power, and in various sections of all forms of bone.

Where bone exists naturally in an exceedingly attenuated form it may consist of a mere aggregation of these granules, unpenetrated by any perceptible pores. This constitutes the simplest form under which the tissue can present itself.

But all the osseous tissue with which the human anatomist is concerned is of such bulk as to contain the series of pores and cavities already alluded to for the conveyance of fluid from and to its vascular surface. These *pores* always advance into the bone from open orifices on its surface. They soon arrange themselves in sets, each of which, after anastomosing with neighboring ones, discharges itself into a small cavity or *lacuna*, in which its individual pores coalesce. From the sides of this lacuna other pores pass off to similar cavities in the vicinity, and others proceed from its opposite surface to penetrate still deeper into the tissue. These pour themselves into another lacuna, or divide themselves between two or three, which are connected in like

manner by lateral channels. From these again pass others, which pursue an onward course from the surface; and so on, until the whole substance of the bone is perforated by them. The pores from the further side of the extreme lacunæ either open on the surface of the bone which they may now have reached, or else take a recurved direction back into the tissue.

When this beautiful system of microscopic pores and cavities was first seen, it was not recognized as such. The lacunæ were imagined to be solid *corpuscles* (a name still commonly applied to them,) and the lines radiating from them to be branching threads of the earthy constituent of bone. They may be proved in many ways, however, to be real excavations in the tissue. With a sufficiently high power their opposite walls can be distinctly seen, as well as their interior; but the most conclusive evidence lies in our being able to fill them with fluid."

The following quotation from the British and Foreign Medico-Chirurgical Review, for January, 1848, shows that interesting discoveries are still being made:

"The chief purpose of this paper is to draw attention to the differences that exist between the bones of different animals, in regard to the size and form of the osseous lacunæ, and the number and mode of radiation of their canalicula. In Mr. Quekett's opinion, these characters are sufficiently definite and constant to serve for the determination of the class, and sometimes even of the order, to which the animal belonged, from the microscopic examination of even a minute fragment of one of its bones. If this should be capable of satisfactory proof,—and we have great confidence that Mr. Quekett would not advance any general statement of this kind but as the result of sufficiently extended researches,—the test is one of great importance in palæontology, whilst the fact is one of high interest to the physiologist. We may notice that Mr. Bowbank has arrived at the same general conclusions; and has specially applied this test to the determination of some doubtful wing-bones found at the Isle of Sheppey. The question lay between their having belonged to a long-winged sea-bird, such as the albatros, or to a gigantic pterodactyle; and it was decided, unequivocally as we believe, in favor of the latter, thus enlarging our ideas of the size of these flying lizards of the ancient world, since the creatures of which the fragments in question formed part must

have had a spread of wing not less than twelve or fourteen feet."

Muscular fibres, as determined by all recent investigations, are found to be of two kinds; the striped, composing all the voluntary muscles, and found, also, in those of the pharynx and heart; and the unstriped, constituting the muscular coats of the stomach, intestines, bladder, uterus and other contractile organs and tissues not influenced by volition.

"The voluntary fibre always presents, upon and within it, longitudinal dark lines, along which it will generally split up into fibrillæ; but it is by a fracture alone that such fibrillæ are obtained. They do not exist as such in the fibre. And, further, it occasionally happens that no disposition whatever is shown to this longitudinal cleavage; but that, on the contrary, violence causes a separation along the transverse dark lines, which always intersect the fibre in a plane perpendicular to its axis. By such a cleavage, discs, and not fibrillæ, are obtained; and this cleavage is just as natural, though less frequent than the former.—Hence it is as proper to say that the fibre is a pile of discs, as that it is a bundle of fibrillæ; but, in fact, it is neither the one nor the other, but a mass in whose structure there is an intimation of the existence of both, and a tendency to cleave in the two directions. If there were a general disintegration along all the lines in both direction, there would result a series of particles, which may be termed *primitive particles* or *sarcous elements*, the union of which constitutes the mass of the fibre. These elementary particles are arranged and united together in the two directions. All the resulting discs as well as fibrillæ are equal to one another in size, and contain an equal number of particles. The same particles compose both. To detach an entire fibrillæ is to abstract a particle of every disc, and *vice versa*. The width of the fibre is therefore uniform, and is equal to the diameter of any one of the discs. Its length is the length of any one of its fibrillæ, and is liable to the greatest variety.

"The striped fibre is enclosed in a tubular sheath or *sarcolemma*, adapted to its surface, and adhering to it. This consists of a transparent, very delicate, but tough and elastic membrane, which isolates the fibre from all other tissues. In general, it has no appearance of any kind of structure; but in the case of bulky fibres, where it is strong in proportion, faint indications may be detected of a complex in-

terweaving of filaments far too minute to be individually recognized. It occasionally has small corpuscles, the remains of cell-nuclei, in contact with it.

"Every fibre is attached by its extremities to fibrous tissue, or to some tissue analogous to it; but an accurate examination of this difficult subject lends no countenance to the ordinary received opinion, that the tissue is prolonged over the whole fibre from end to end, as its cellular sheath; nor is this view reconcilable with the physical requirements of the case. It is extremely difficult to isolate a muscular fibre, with the tendinous fibrillæ pertaining to it, either in mammalia or birds; but this may be occasionally accomplished in fishes, and in certain muscles of insects. In these examples, the minute detachment of the fibrous tissue may be seen to pass, and to become attached to the truncated extremity of the fibre. The fibre ends by a perfect disc, and with the whole surface of this disc the tendon is connected and continuous. The sarcolemma ceases abruptly at the circumference of the terminal disc, and here some small part of the tendinous material appears to be joined to it.

"Muscles grow by an increase, not of the number, but of the bulk of their elementary fibres: there is reason to believe that the number of fibres remain through life as it was in the foetus, and that the spare or muscular build of the individual is determined by the mould in which his body was originally cast."

The unstriped fibres "consist of flattened bands, generally of a pale color, bulged at frequent intervals by elongated puscles, similar to those of striped muscle and capable of being displayed by the same process. The texture of these fibres seem to be homogeneous. By transmitted light, they have usually a soft, very finely mottled aspect, and without a darkly-shaded border. Sometimes the mottling is so decided as to appear granular, and occasionally these granules are arranged in a linear series for some distance. This condition is probably an approach towards the structure of the striped fibre, for these granules are about the size of the sarcous elements already described."

Muscles receive their nutrition from capillary vessels of a size to admit of the passage of but a single row of blood globules, and consisting of "longitudinal and transverse vessels: the longitudinal always following the course of the elementary fibres, and lying in the intervals between

them ; the transverse being short communications placed at nearly equal distances between the longitudinal ones, and crossing nearly, or quite, transversely over or under the fibres."

Nerves distributed to muscles are found to pass, like blood vessels, between the primitive fibres and to cross them not transversely, like the capillaries, but obliquely ; the ultimate tubules of the nerves, separating into sets of two or more and ultimately from each other, forming arches and returning either to another or to the same trunk from which they set out.

"In this loop-like course they accompany to some extent the minute blood-vessels, but do not accurately follow them in their last windings, since their distribution is in a different figure. They pass among the fibres of the muscle, and touch the sarcolemma as they pass ; but, as far as present researches have informed us they are entirely precluded by this structure from all contact with the contratile material, and from all immediate intercourse with it. How then shall we explain the transmission of the nervous influence to a material thus enclosed ? If it were wise or safe to go a single step in advance of pure observation on so obtruse a question, we might suggest, resting on the seemingly sure ground of exact anatomy, that this influence must be of a nature capable of emanating beyond the limits of the organ which furnishes it. But further than this, as to how, or to what extent this influence may so emanate, or as to what may be the nature, it would, perhaps, in the present state of knowledge, be hardly warrantable even to speculate."

For want of time and space, we are compelled to defer for the present, making quotations from other still more interesting chapters. We hope to be able to give at some future time that degree of attention which it merits to other portions of the work. H.

PART III.—BIBLIOGRAPHICAL NOTICES.

ARTICLE VIII.

The Half Yearly Abstract of Medical Sciences. Edited by W. H. RANKIN, M. D. &c. &c., No. 6. July to January, 1838. (From the Publishers.)

The deservedly high reputation of this most excellent work is fully sustained in the number before us.

Its analytical digest of the contents of new works, and the reports which it gives on the progress of Medicine during the preceding six months, afford a greater amount of information, in a condensed form than can be obtained elsewhere for any thing like the trifling sum of 75 cents, the cost of a number.

No practitioner should neglect to supply himself with so valuable a source of information.

ARTICLE IX.

The Principles and Practice of Midwifery. By DAVID H. TUCKER, M. D., Professor of the Principles and Practice of Medicine, and formerly of Obstetrics, &c., in the Franklin Medical College, Philadelphia. (with numerous illustrations.) Philadelphia, Lindsay & Blakiston. 1848. pp. 486, 8vo. (From the Publishers.)

This work is the first of a series entitled "The Medical Practitioner's and Medical Student's Library," which the enterprising Publishers are preparing for publication. The several numbers of the series are to be published in "a cheap form, and at one half the usual price of Medical Books," thereby affording to the members of the Profession, possessing limited means, an opportunity of procuring valuable books at a small cost.

The work in question, is "a concise and practical treatise upon Obstetrics," compiled from the latest American,

English and French works, designed more particularly for the use of Medical Students, but is well deserving of a place in the Library of the Practitioner, as a book for reference and study.

The Publishers give notice that this will soon be followed by others of the series, treating upon the different Elementary and Practical Branches of Midwifery—each volume complete in itself.

From our examination of the work, we would recommend it, together with the Library, to members of the Profession in the West, as a valuable addition to our Medical Literature.

ARTICLE X.

Twenty-seventh Annual Report of the Bloomingdale Asylum for the Insane. By PLINY EARLE, M. D., Physician to the Asylum, 1848.

Fifth Annual Report of the Managers of the (New York) State Lunatic Asylum, made to the Legislature, Jan. 1848.

Report of the Pennsylvania Hospital for the Insane for the year 1847. By THOMAS S. KIRKBRIDE, M. D., Physician to the Institution. Published by order of the Board of Managers, 1848.

The reports before us furnish most gratifying evidence of the prosperity of these institutions and show most conclusively, that by every years experience, new facts are developed with regard to the best mode of treating and managing this unfortunate class of our fellow beings.

Out of 274 cases there have been discharged from the Bloomingdale Asylum 58 cured, 17 much improved, 23 improved, 18 unimproved—total 116. New York State Asylum reports as discharged 1,137, in conditions as follows: recovered, 640; improved, 269; unimproved 114; died, 114. Total discharged from the Pennsylvania Hospital 213, as follows: cured, 111; much improved, 21; improved, 29; stationary 23; died, 29.

PART IV.—SELECTIONS.

1. *On a New Criterion for the Regulation of Blood-letting.* (From a Review of Polli's Researches on the Blood. Med. Chirurg. Rev., Oct. 1847.)

[This criterion is deduced from the author's former series of researches, and confirmed by practical application in the hospital. It is thus stated to be "*The period of coagulation of the blood observed at different intervals of time between the abstractions, and in different portions of the mass taken during one blood-letting;*" and is amplified as follows :]

"1. Every time a large abstraction of blood is practised so as to lead to lipothymia, *the last portion* of that removed always coagulates with *greatest promptitude*, whatever may have been the time occupied by the first portion in coagulating. 2. Whenever, on the contrary, upon a person suffering from sanguineous congestion of the nervous centres, asphyxia, apoplexy, &c., bleeding is practised, and, by its use, the vital functions are again set at liberty, the last portion of the blood so removed coagulates *much more slowly* than that which was first emitted. 3. That it suffices to interrupt in some manner the course of the blood in the vein, or to diminish, by means of a ligature applied to an extremity, the irradiation of the nervous power, in order to secure the speedy coagulation of blood, which, a short time after, owing to the obstacles being removed, may reacquire the power of remaining long without coagulation. 4. That in diseases decidedly of an inflammatory and grave character, during which for the safety of the patient repeated blood-letting is requisite, if, on the occasion of every venesection, the coagulation of the first and last portions drawn be examined, it will be found that at the beginning the coagulation of the latter portion takes place *subsequently* to the former, and continues to do so in an equal ratio to the development of the morbid process, until this reaches its height. From this point, however, as the disease commences declining, the coagulation of the blood of the latter portion *precedes* that of the former. 5. That in cases in which abstraction of blood has been desisted from for some days, when the *slow coagulation of the last portion* taken announced a continuance of the phlogistic increment and the tolerance of blood-letting, it has become necessary to resort anew to this therapeutical agent, which can in no

case be laid aside with the ready cure of the patient, unless the latter portion of the blood manifest an opposite disposition to that now pointed out. 6. That in opposite cases, in which the abstraction of blood is persisted in *notwithstanding its rapid coagulation* after all the venesections and during the two extreme periods of the same one, it has to be speedily renounced in consequence of the symptoms of intolerance which manifest themselves; and in those few unfortunate cases in which blood-letting is obstinately persevered in under the guidance of fallacious symptoms, vital exhaustion cuts short the career of the patient much more rapidly than would have done the course of the disease.

"It results, then, from these observations, that the maintenance of the fluid state of the blood, comparing one bleeding with another, or different periods of the same bleeding, is a measure of the vital energy proper to the individual, and of that brought into play by the morbid process; and that hence may be determined tolerance and indication of blood-letting; as on the other hand a prompt coagulation of the blood announces diminution of vital energy, or its exhaustion by the pathological action; and in every case that the power of governing the phlogistic or morbid vital movements is lowered."

[The criterion is of easy application, the first and last portions of blood drawn being separately collected in glass vessels, and placed at rest beyond the influence of disturbing causes before adverted to. As the difference of time employed by the blood in coagulating depends both upon the condition of the individual and the amount of blood drawn, the criterion in question may not only serve as a guide in judging of the propriety of bleeding in a certain contingency, but may determine the exact quantity to be drawn, and the period of its repetition.]

"Let an individual be bled to faintness, and you will always have the last portion of the blood rapidly coagulated, and consequently deprived of buffiness. Receive the blood into six, eight, or ten small recipients, of a similar form and nature, and the coagulation in the first will be in exact relation with the disposition of the fibrine to maintain itself in the liquid form proportionately to the particular physiological or morbid state of the organism; while in the last, such disposition will become gradually paralyzed and almost destroyed, from the gradually increasing effect of the abstraction itself. By contemplating this phenome-

non, which is always a result bearing proportion to the two influences above alluded to, we are enabled to lay down a rule. for in some cases practising abundant blood-letting at one time, in others practising it at intervals, or in small quantities ; or again simply interrupting its flow once or twice for some minutes during the abstraction, &c., accordingly as we may be desirous of obtaining a sudden subdual of the morbid exuberance of the vascular activity, or of securing a copious depletion without too great exhaustion of the strength, or the functional disturbance ensuing upon lipothymia, which may injuriously effect the regular course of some affections.

"From the different coagulation of the various portions of blood we may, moreover, as we have said, measure the *intensity of the inflammation* and the *tolerance of the individual* ; or, as others would express it, we may measure the morbid capacity and the amount of diathesis. There may, indeed, be a case in which the first portion of blood drawn indicates by its very slow coagulation a very high pathological condition, while the last portion announces in its rapid coagulation that the emission of blood has completely lowered the powers. This phenomenon may be dependent upon the existence of a very circumscribed, though a very intense affection, or upon exhaustion induced in an individual primarily possessed of very feeble powers of organic reaction ; and in such a case bleeding must be most reservedly employed, and frequently entirely rejected, for the reason that it is a less danger to leave the disease to proceed unchecked, than to have recourse to means which remove it and the patient together. This difficult pathological circumstance, which a celebrated Italian physician justly compares to an *island of fire in a sea of ice*, is already known to practitioners alone which requires in the use of antiphlogistic measures great regard to be paid to the failure of the general strength. But, unfortunately, it has not always been easy to establish its diagnosis in time, or before undavisingly energetic therapeutical procedures have been put into force. But the criterion I propose informs us of these two opposite conditions co-existing in the same individuals, and measures their degree with a facility and security that no method of investigation hitherto recommended in these difficult cases can boast of."

[To the objection that the criterion only comes into operation after the abstraction of blood, Dr. Polli observes that in ordinary inflammatory diseases, the repetition of the blood-

letting is the point to be inquired into ; and that, even in those rare cases in which the diagnosis is very obscure, and in which a first bleeding might prove the cause of safety or of death, no harm whatever, and much good, would result from a very small *exploratory* venesection, and made in the view of obtaining the desired information. Such, consisting of one or two ounces, received in two separate vessels, should be instituted in all obscure cases of this kind, before resorting to an ordinary venesection.] "Perhaps even those small bleedings should be practised in all diseases indistinctly as a means of exploring the condition of the blood, for the same reason that, since auscultation has been employed upon all patients, it has not unfrequently revealed latent morbid conditions, to which the attention of the practitioner might otherwise not have been called until a more remote and a too late period." [A small subtraction which can do no harm to the economy, will yet depict to us the true characters of the vital condition of the tissues, and of the amount of the exaltation of the vascular activity and nervous function. It often suffices for the discovery of those circumscribed and concealed phlegmasiæ, which, frequently not spreading to such organs as would furnish external symptoms of their existence, pursue their undermining course until they have reduced the viscera they affect to such a condition, that some acute contingency at last suddenly betrays their formidable character.]

"Although the preservation of its fluidity by the blood, or the more or less time it requires for coagulation, constitutes for us the most certain measure of the activity of the phlogistic force, this is however, only curable in its indications in proportion to the stability of the morbid process itself. The phlogosis may, during its course, spontaneously increase or diminish in intensity, accordingly as it extends to neighboring tissues, or is confined to those first invaded. So that the different resistance of the blood to coagulation, which in every case announces with a rare exactitude the present state, cannot be extended, except within certain limits, to the indication of that which is to follow ; since this latter can only be the complex and simultaneous effect of the condition of the development of the pathological lesion, and of the modification which the blood-letting itself may have induced. Our criterion, as expressing the present state of the organism, and the impression which the bleeding has developed, furnishes indications which are available for about twelve hours after, and may continue to

be so for a much longer period, even to the supervention of complete health, providing new morbid causes and accidental inflammation do not supervene and complicate the course of the disease. And of this we may assure ourselves by the repeated observation of the coagulation of blood taken at brief intervals; since the times employed in the coagulation of the blood taken at the successive abstractions will generally glide, whether these are diminishing or increasing, gradually into each other, sudden variations not being observable, save when exacerbations or irregular complications coincide."

[In corroboration of the above views, tables are furnished of twenty cases of inflammatory disease observed in the hospital, for the relief of which were collectively performed 147 venesections. Notes to each case reported exhibit the author's views of the amount of corroboration derivable from it. Some of these are highly interesting, but we have only space to notice some of the practical conclusions he arrives at.]

"The observations already made upon the indications the physician may draw from the observation of the coagulation of the blood, and the clinical cases adduced in confirmation and illustration of this criterion, clearly prove that its value rather lies in its enabling us to fix a limit to the abstraction than in encouraging its continuation. And, in fact, if we are not deceived, the comparison of the coagulation of the first and last portions may, independently of the presence of all other symptoms, distinctly indicate whether the evacuation will tend to normalize the vital powers of the functions of the organism, at one time liberating them from oppressive congestions, and at another from the obstacles presented by the excessive and unbalanced action of the nerves, or whether it attacks them with all its impoverishing effects, and directly exhaust the forces necessary to the carrying on of life. Of the two indications which this sign offers the least is not only the most important, since its neglect almost amounts to a fatal result in the disease, but it is also the most attainable, or at least the best supported by facts. The cases referred to show that, if the coagulation takes place with a certain celerity, and this manifests itself repeatedly, and goes on increasing with the blood-letting, we cannot persist in the measure without losing the patient; while the patient hardly ever dies when it is suspended prior to the coagulation having acquired great rapidity.

"It is not necessary for the complete cure of an inflammation to continue the bleedings until the blood no longer gives any buffiness ; while it is absolutely necessary to cease the omission when the blood coagulates more rapidly than in the normal state. The production of buffiness of blood of equal coagulability, as shown in the former series, is always rendered more easy and in larger quantity after a certain number of bleedings than at first, in consequence of the diminished density which the blood acquires, which naturally always much diminishes the phlogistic expression, and the consequent indication for bleeding drawn from the crust that covers the blood after a certain number of emissions. The crust or buffiness, in fact not being *essentially* produced by an increase of fibrine, by a diminution of red globules, or by an attenuation of the serum, but arising from a certain slowness of the coagulation, (of that faculty by which, in certain morbid conditions of the organism, and especially under the influence of the phlogistic process, the fibrine has acquired the power of maintaining itself in a state of fluidity for a period always much longer than in the normal state,) it may at once disappear by the operation of whatever modifies that slowness. When the phlegmasia is subdued, and the morbid reactions give way to healthy movements, the blood will then undergo coagulation in a period of time that does not permit the appearance of the buffiness. It happens not unfrequently that if, for some reason independently of a reproduction of the phlegmasia, we draw blood during the advanced convalescence of a severe inflammation, in the treatment of which bleeding has been suspended, while the blood was yet covered with a firm phlogistic crust, it will now be found to present no trace whatever of this. A patient may have blood in circulation which if drawn would furnish a buffy crust, and who will yet be perfectly cured without blood-letting. This change in the blood within the vessels, without profuse crises inducing the belief that the morbid matters supposed to be indicated by the buffiness had been evacuated by other channels, frequently excited the surprise of the ancients ; but faithful to observation, they had nevertheless laid down as a canon "*Ob solam crustam inflammatoriam venæsectio repetenda non est.*" (Quarin, *Met. Med. Inflam.*, p. 70.)—Rankin's Abstract, Jan. 1848.

2. *On the Treatment of Fever by Cold Water.* By WILLIAM GILL, M. D., Physician to the Nottingham Dispensa-

ry, &c. (Provincial Medical and Surgical Journal, September 22.)

[In our last volume, p. 3, the reader will find a communication by Mr. Stallard, of Leicester, upon the efficacy of the external application of cold water as a refrigerant and sudorific in fever; we continue the subject by the following abstract of a paper which was read at the last meeting of the Provincial Medical and Surgical Association.]

"Before entering more immediately on the object of this paper, the author describes concisely the general features of the prevalent fever. In most cases the *immediate* cause of the attack was traceable to sleeping in crowded lodging-houses, the usual abode of fever in large cities; the proximate causes, doubtless, were over-fatigue, and insufficient and unwholesome food. The term "hunger pestilence" has been aptly applied to the disease. A true typhoid gastro-enterite was present in many of the patients, closely resembling what so frequently is observed in the Parisian hospitals. Whether the essentiality of the fever existed in the condition of the muco-alimentary membrane or not, it was not the author's intention to discuss. This, however, he remarked, that *so soon* as the signs of gastro-alimentary irritation were subdued, the signs of general fever subsided. Some two or three cases, which he read, corroborate this observation. In the generality of patients under his care, not only was the gastro-alimentary membrane affected, but also the muco-pulmonary, as evinced by cough, shortness of respiration, and frequently universal sonorous râles, affecting the whole of the chest. In most of the Irish sick, the skin was spotted with petechiæ, of different sizes and color, chiefly developed on the abdomen and chest. This was not remarked amongst the English cases. There was no discharge of blood from the inner membranes. (Edema of the lower extremities occurring early in the disease was generally a fatal symptom, though we had two cases of recovery in boys, who were universally anasarcaous from the commencement. The disturbance of the sensorium was marked by a low muttering delirium, sometimes wandering about the bedroom, constant picking at the bedclothes, and subsultus tendinum. Some were affected with a heavy, comatose, and stupid state, from which they were with difficulty aroused, and when aroused, with difficulty were made to understand questions; they relapsed immediately into the same lethargic condition when left to themselves. This comatose condition oft-

en continued till convalescence was established, and, in some even later. It seemed a perfect prostration of all mental energy, and was only relieved as the bodily powers regained their tone. In no one case did active delirium occur. The secretions from the bowels were thin, frequent, black, and offensive, and often attended with severe griping, but no bloody discharges. The function of the bladder in one or two individuals was suspended, and it was necessary twice daily to use the catheter. The usual period of the termination of the fever seemed to be from the eighteenth to the twenty-first day, at which time the patients were left in a state of the greatest prostration. When the case terminated fatally, an unrousable, unconscious coma closed the scene. The usual symptoms of fever were generally present,—as the hot dry skin, black tongue, urgent thirst, pulse varying from 90 to 130, insomnia, and pains in head, back, and limbs, &c. After this brief description of the general features of the disease, he proceeds to the treatment.

He remarks that he is well aware that a great prejudice exists in the profession against the treatment to be advocated, partly because it is opposed to preconceived opinions, and chiefly from the unprofessional manner in which it has been ushered into notice. Feeling certain, however, that he was addressing a body of gentlemen willing to receive *truth for the sake of itself*, he, with perfect confidence, detailed a treatment of fever as yet untaught in the schools, and generally unrecognized by the profession.

Dr. Currie, of Liverpool, was the first scientific English physician who enlisted cold water as an external remedial agent in the treatment of fevers. Successful as the practice was under his direction, it has been little followed in later times. It is only within the last few years that the prejudices which existed against the internal and external use of water has begun to subside. "Perhaps," observes the author, "the prominence of the sanitary questions, and the many evils proved to arise from the want of a due supply of pure water, has had much to do in removing this groundless prejudice, and may have produced an undue reaction in its favor, causing it to be considered *not only* as necessary to a healthy condition, but as a *curative agent* of universal efficacy. Hence, perhaps, the public mind has been somewhat prepared to receive the hydropathic theory with much more favor than its intrinsic merits demand.—An universal remedy will ever find many advocates, and in a numerous profession like ours, there are ever men to

be found who, from selfish motives, will pander to this diseased taste of the public mind. We as an association, must ever protest against such exclusive theories as prevail in our days, being in our opinion unscientific, opposed to experience, and calculated to lead to incorrect views respecting the power of many known and valued medicinal agents. In making this protest against any exclusive theory for the cure of diseases, we must not rush into the opposite extreme, and, from disbelief of their universal efficacy, deny their particular efficacy, when the touchstone of experience speaks to the contrary."

The plan the author has adopted for the cure of fever, has been a modification of Dr. Currie's. Instead of pouring buckets of cold water over the body, he has it enveloped in a wetted sheet; an instrument more effective than Currie's in respiration, which did not uniformly follow his plan. The fear of evil consequences from the treatment is groundless. He gives no opinion as to its utility, except in cases of fever. Here, however, he states that he can speak with confidence. When the skin is burning hot, and the mouth and tongue parched, the application of a sheet wrung out of cold water, and applied *closely* to the whole surface of the body, and evaporation prevented by the application of three or four blankets placed over it, produces a most grateful feeling of refreshment, which is soon followed by a more or less warm perspiration. In young people, this perspiration breaks out in from five to ten minutes after its application; in middle-aged people the period is longer. Many uncomfortable sensations are soon relieved by its use; such as muscular pains in the back, thighs and legs, and the sense of aching and weariness; the thirst often becomes less, and even the dry tongue sympathises with the relaxing influence induced on the cutaneous surface. He has seen the low moaning delirium subside whilst under its use; and some patients, who have not slept before, doze, especially if the hair has previously been cut short, and a flannel nightcap, wetted with vinegar and water, been applied to the head.

The simple plan he has followed has been this:—On a flock-bed he has placed from three to five blankets; superimposed over these, a sheet wrung out of cold water, on which the patient, stripped, is placed, with legs outstretched, and arms to the side; the sheet is then drawn tightly around, up to the neck, and inclosing the feet; first one blanket, then another, and so on to the whole number,

are tightly drawn over the sheet, so as to have the *whole body well and closely packed*. In this state, the patient lies from a quarter of an hour to one or two hours, according to the object in view, and the effect produced. Some get tired at the end of half an hour, some can continue for one or two hours, and feel very comfortable. As soon as a gentle perspiration commences, a wineglassfull of water is given frequently. At the commencement of this treatment, in a case of fever, he has generally ordered its use for one hour; after that time the wet things are removed, and the sick person is placed in bed, well wrapped in three blankets, and allowed to perspire for three hours; afterwards the blankets are to be carefully removed, one at a time, so as to allow the perspiration to subside gradually, and the patient is then placed in bed, between the sheets.

During the whole of this period, small quantities of water should be given. In the summer, during this process, a free ventilation may be allowed in the chamber, in winter it is necessary to have a good fire, and to have one blanket well warmed, to apply around the body, so soon as removed from the wet sheet.

Several cases of incipient fever have lost all traces of disease after the first application. If the fever be not reduced, the next day the same plan must be repeated, keeping the patient in the wetted sheet from half an hour to one hour, according to the intensity of the symptoms, and in the blankets from one to two hours. This may be repeated every day till indications of a cool skin arise, then it must be immediately discontinued.

During some period of this treatment, the temperature of the atmosphere being very high, (75° to 78° in shade,) the author has not found it advisable to keep the patient as long as two hours sweating in the blankets; from an hour to one hour was sufficient. A longer period caused the pulse to be accelerated instead of lowered, which latter is the usual effect of the treatment. In very hot weather, when a free perspiration has been induced at the commencement of the fever, he has adopted the following plan. To wrap the sick person for half an hour in the wet sheet, covered lightly with one blanket; to be then washed all over with a towel wetted in tepid water, then rubbed dry, and placed in bed between the sheets. He has not found it necessary to make use of this treatment more than five times to the same individual; generally after the third or fourth application, the skin becomes cooler, and the other

signs of the fever gradually subside. When the skin becomes cool, and the tongue less dry, he has instantly discontinued all water remedies, and given bark, wine and broths, and it was surprising how soon convalescence and strength became established. During the whole course of the fever, milk and water, or weak broths, were allowed *ad libitum*. In one person, twice in the course of the same day, owing to the intensity of the fever, it was found necessary to repeat the wet sheet, using it the second time for only half the period of the first; a comfortable night ensued.

Without doubt, this is a most effective mode of *quickly* reducing the temperature of the body; an equilibrium is soon established between the cold of the water and the heat of the body, and the patient becomes bathed in a natural vapour-bath, as may be felt by placing the hand under the bedclothes. Where the fever runs high, and the delirium is violent, the wet sheet may be safely applied for short periods (two minutes,) several times in the course of the day. This will be found a more effectual mode of reducing the cerebral excitement than any other means with which we are acquainted. This refrigerating plan, used for ten minutes, during an evening exacerbation, will often produce a few hours' refreshing sleep.

The author confesses that he had, at first great doubts as to the *safety* of this treatment, where the mucous membranes of the bronchi and gastro-alimentary passages were complicated. Very soon his fears on this head were dissipated by the convincing evidence of experience; in fact, *these* proved the case in which the decided benefit of the treatment was most marked. The quick and embarrassed respiration, dry cough, and sonorous râles, subsided quickly after one or two applications of the wet sheet; the cough became looser, the râles moister, and expectoration was established.

The same happy change also occurred where the gastro-alimentary membranes were disordered. Generally, the first wet sheets puts a stop to the diarrhoea, and soon afterwards, pain and swelling disappeared. A confined state of the bowels was frequently the effect of the wet sheet, and it was found necessary, in several of the patients, to resort to small doses of castor oil. In three or four cases, the symptoms of gastric and abdominal irritation or inflammation were so violent as to have justified the employment of leeches in the usual treatment followed in the Parisian hospitals, and yet by the simple means mentioned, in three

days every bad symptom had vanished. A great saving is made to the patient's strength, when we can dispense with the abstraction of blood.

As the author is anxious to make this paper altogether practical, he does not enter into any theory respecting the *modus operandi* of the wet sheet.

The following selection of cases was read :

CASE I. Michael Kane, aged 18, Irish vagrant, of vigorous constitution. He has been in the Union Hospital five days, under the care of Mr. Stiff, and taken salines.

June 28th. The following is his present condition :—Supination in a lethargic state, and unconscious, unless violently aroused ; the face purplish red ; eyes bloodshot and pupil dilated ; constant picking at the bedclothes ; subsultus tendinum ; low muttering delirium ; the skin furnace-hot ; tongue dry, shrivelled, black, and covered with sor-des ; diarrhœa ; general tympanitis of abdomen, with much expression of pain when pressed, unless aroused, and then his face indicates the existence of pain ; the urine and stool are not passed involuntarily ; the abdomen and skin generally covered with dark-colored petechiæ ; the respiration hurried, forty-four in the minute, and the stethoscope reveals universal bronchitic râles in the chest ; pulse 130, weak and hurried. The treatment ordered was the application of the wetted sheet for one hour, blanket for two hours ; the head to be shaved, and a flannel night-cap, wetted with vinegar and water, to be constantly applied. To have milk and water *ad libitum*.

There evidently were clear signs of head, chest and abdomen complication. The bloodshot eye and purple countenance, accompanying a nearly unconscious state, indicated a congestive condition of the brain. The stethoscope revealed a similar condition in the lungs, and the universal swelling of the abdomen, attended by diarrhœa, and by pain when the patient was partly sensible, added no little to cause a most unfavorable prognosis to be formed.

June 29th. The aspect is better ; has passed a better night ; the picking at the bedclothes and the low muttering delirium are quite subsided ; the skin is cooler and rather inclined to moisture ; the purging no longer continues, and there is less tympanitis ; breathing and dry cough less troublesome ; respiration not so frequent when lying quiet but the slightest movement causes it to be accelerated ; the râles moister ; the man more intelligent when aroused, but still instantly falls into a doze when left to himself ; the

tongue not so black or dry ; the pulse come down to 100, regular and soft. He sweated much both in the sheet and blankets. To repeat the wet sheet and blankets as before.

30th. Continues better in all respects. No further application of the wet sheet.

July 1st. The man is convalescent ; skin cool and moist ; tongue has nearly lost all marks of dryness and blackness ; urine free and paler colored ; bowels open once daily ; intelligence nearly restored ; pulse 90 ; the chest and abdominal complications rapidly subsiding ; the patient asks for nourishing diet. To have the bark, mutton broth, and bread and milk.

July 4th. To have meat daily.

5th. Is able to walk in the room.

6th. Is down stairs in the yard, and well.

CASE II. Martin Glynn, Irish vagrant, aged 13, has been ill three days.

June 9th. There is intense heat of skin, and flushing of the face, with pains in the head, bones, abdomen, back, and legs ; great thirst ; tongue deep red and covered in the centre with a cream-colored fur ; great pain in epigastrium, and a tympanitic condition of the abdomen, with diarrhoea ; there exists slight cough, but no râles in the chest ; the tongue is tremulous and subsultus tendinum is present ; no sleep ; pulse 110, rather sharp ; urine scanty, and high colored.

To have the wet sheet for one hour, and blankets for three hours. Milk and water to drink. The abdominal complication was most marked in this case—a *true typhoid gastro-enterite*.

10th. Continues in many respects the same ; the diarrhoea, however, has subsided. Was ordered a repetition of the treatment, and the vinegar and water lotion to the head.

11th. Says he is better to-day ; the skin is cooler, and inclined to moisture ; face very little flushed ; tongue becoming less dry and red ; headache better ; no pain in epigastrium or abdomen ; bowels confined ; urine free and paler ; less thirst ; pulse 110, but not so sharp. To repeat the wet sheet as before.

12th. Convalescent ; slept the whole of the night, and makes no complaint this morning, except weakness. Face cool ; headache gone ; tongue clean and moist ; urine free ; pulse 64, very soft ; appetite returning. To have mutton broth and bread and milk.

13th. To have rice pudding and meat.

16th. Is able to walk in the yard, and may be considered well.

CASE III. Thomas Gafen, Irish, aged 14, of healthy habits, ill for three days.

July 8th. Face flushed and anxious; skin very dry and hot; tongue of a vivid red, and in the centre covered with a dirty cream-colored fur, becoming dry and black in places; great thirst; throbbing pain in the head, epigastrium and limbs; pulse 120, wiry, and small; considerable tenderness in epigastrium; gurgling in iliac region, accompanied with diarrhoea; the respiration hurried; frequent cough, and universal sonorous râles in the chest; no sleep, urine scanty. Was ordered the wetted sheet for one hour, the blankets for two hours. Hair to be cut short, and the wetted cap applied. Milk and water to drink.

9th. Continues in all respects the same, except that the skin is somewhat cooler.

10th. Wonderfully better; slept much in the night; aspect natural; no heat of face or skin, which is inclined to moisture; tongue moist, and losing its fur; very slight thirst; urine free; bowels open twice since the 10th, and has lost all pains in the head and epigastrium; pulse 76, soft. No further application was ordered.

On the 14th the boy was allowed to sit up, and have meat, and was considered convalescent.

In conclusion, the author inquires whether we may not draw the following conclusion from the facts brought forward:

1. That the judicious use of the wet sheet has a powerful influence in relieving many of the most distressing symptoms of fever.

2. That if applied *very early* in the disease, it may in some cases arrest its further progress.

3. That if used *later* in the disease it has a controlling influence, bringing the fever to a termination much earlier than by any other known treatment.

4. That the ordinary *complications* of fever are no arguments against, but rather for its use.

5. That with this treatment, weak broths and milk and water, *ad libitum*, may be allowed.

6. That the first symptoms of the subsidence of the fever, were a cool and often moist condition of the skin, a diminution of thirst, and an improvement of the tongue.—When these changes occur, the treatment must directly be discontinued, and the bark and better diet be ordered.

7. That some of the worst cases of typhus fever were convalescent, and walked about on the fifteenth day from the commencement of the attack.

[We may further observe that, at the Newton Branch Meeting of the Provincial Association, reported in the same number of the Journal, Mr. Burrows related the result of his experience of the above mode of treating fevers.]

He commences by clearing the primæ viæ. If the skin remained hot and dry, the mental faculties dull and cloudy, the limbs painful and weary, he ordered his patients to be stripped and enveloped in a sheet wrung out of cold water, and closely wrapped in thick blankets. This application was continued forty minutes, or more, according to the effect produced. During the interval warm diluents were freely administered, and when a copious perspiration ensued, the wrappings were removed, and the patient covered with the ordinary bedclothes. When the patient exhibited all the symptoms of "famine fever," viz: cold skin, feeble pulse, &c., he modified the treatment by wringing the sheet out of very hot water, and covering the patient as before, at the same time gave hot negus and acetate of ammonia. When sweating was induced it was maintained by placing a hot brick wrapped in flannel at the feet.—The patients invariably expressed themselves relieved by this treatment, and some continued to convalesce from that period; others had a marked crisis on the eleventh to the fourteenth day. Mr. Burrows states that he feels convinced that, applied during the initiatory stage of fever, the wet sheet, with purgative and diaphoretic medicines, has prevented the further development of febrile action, and removed the first impression made by the poison upon the system.—*Ibid.*

3. *On the employment of Inhalation of Ether in some Forms of Ophthalmia.* By Dr. MACKENZIE, of Glasgow.

A recent number of the 'Annales d'Oculistique' contains a short communication from Dr. Mackenzie; and as we believe he has not published it in any English journal, we present an abstract, confirmatory as it is of the statements previously made upon the subject by MM. Cunier, Alex, and others. Having convinced himself of the power of ether in preventing the pain of operations, Dr. Mackenzie determined to examine its capability of assuaging some of the more painful affections of the eye, in which intense photophobia is a prominent symptom. "I therefore employed

it in a series of cases, both in my infirmary and my private practice, and with the most satisfactory results; I have prescribed it for scrofulous ophthalmia, corneitis, sympathetic ophthalmia, neuralgia of the branches of the 5th pair, and asthenopia; and have obtained some benefit from its use in all these diseases, but principally in the first three." Three cases are given in illustration. The first of these was an example of *scrofulous ophthalmia* of three months' duration, accompanied with great photophobia. Every variety of treatment had been tried, but the temporary amendment produced was always followed by relapse at no distant period. The immediate relief afforded to the photophobia by the ether was remarkable; the patient, who had shrunk from the least access of light, being enabled to open her eyes and guide herself from a room she had been accustomed to be led out of in darkness. The amelioration continued permanent, the photophobia not returning, although the inhalation was only resorted to twice, at an interval of some days. In a case of intense *corneitis* great pain and intolerance of light prevailed, and much opacity of the cornea existed. It was one of the severest cases Dr. Mackenzie had ever seen, and yet, prompt relief of the photophobia followed the use of the ether. This was resorted to several times, until tolerance of light had become quite established, and the transparency of the cornea somewhat restored. The third case was an example of the removal, by the same agency, of a disease which usually resists our ordinary means of cure, namely *sympathetic ophthalmia* of the one eye, succeeding to a wound of the other. In this instance, the pain and intolerance were intense, and the inflammation of the various textures of the eye had not yielded to mercurialization, when great and progressive relief was attained by the inhalation. It was employed at intervals of a few days during a month.—*Annales d'Oculistique*, tom. xviii, pp. 155-9. From *British and Foreign Medical Chir. Review*.

4. *On the Use of Ocular Douches for the treatment of Purulent Ophthalmia of Infants, Opacities of the Cornea, &c.*
By M. CHASSAIGNAC.

M. Chassaignac has for the last six months employed irrigation of the eye for the treatment of the ophthalmia of young infants with the greatest success; so that while formerly blindness at the Foundling Hospital was constantly occurring from this cause, it is now seldom so produced

there. The child is laid on a table, and water allowed to flow from a small tap through a tube over the surface of the eye during from 5 to 15 minutes several times a day. M. Chassaignac has discovered that in this disease a pseudo-membrane is frequently produced, the removal of which much expedites the treatment. The mortality of children suffering from disease of the eyes during the last ten years was 1 in 3; while since this plan has been adopted, it has been but 1 in 8. In the course of investigation, this means was found applicable to several other inflammatory conditions of the eye, and also especially for the removal of opacities of the cornea which resist ordinary means. Accounts of its really remarkable success in this last important application, have just been published by one of the assistants at the hospital,—*L'Union Médicale*, No. 140. *Ibid.*

5. *A case of Rupture of the Womb occurring during labor, and followed by recovery.* By Dr. PRASSART.

Cases of recovery after rupture of the womb are of such rare occurrence, that we are desirous of recording the leading features of this one, the subject of which had to contend alike with her formidable accident and the neglect of her attendant. A woman, æt. 37, of muscular make and very choleric temper, had been in labour for six or 8 hours, on 1st of February, when, at about 4 p. m., on getting on the bed she was seized with a tremendous pain, contemporaneously with which the waters were discharged, and a loud cracking sound was heard. She complained of terrible suffering at the umbilical region, and grasped this with both her hands. Labour-pain ceased, and she became ghastly and cold, so that her friends believed her in the act of dying, and had the religious sacraments administered. After a long period, however, they determined to call in advice, and about six hours after the accident the author saw her. He found her suffering from the extremest prostration and intense tenderness of the belly, through the parietes of which the parts of the child were plainly felt. He easily delivered her of the dead child by means of the forceps, a large discharge of blood following. He endeavoured to ascertain the size and position of the aperture, but could only discover that his hand at once passed into the cavity of the abdomen, whence he removed the placenta, and that large coils of intestine passed into the uterus, the great pain induced forcing him to desist. The woman, after this, seemed almost lifeless, and the author informed her friends that she could

not live the night. With true Germanic phlegm, he seems to have taken no pains to ascertain whether his prediction was verified, and in *four days* after was much surprised at being again called to visit the patient. He now found severe inflammatory action of the womb and abdomen set up, accompanied by great prostration of strength. We need not follow the case through its remaining details, presenting, as it does, but another example of the occasional wonderful power which Nature employs in coping with the direst extremities of disease. The author, from his unfrequent visits (alternate days) and the nugatory character of his treatment, may be considered as having delivered it over into her hands, the result being, that in four weeks the woman was enabled to leave her bed. She continued for some time after her recovery to be tormented with occasional severe pains; but in the course of the following year natural menstruation was re-established.—*Casper's Wochenschrift*, No. xli, 1847. *Ibid.*

6. *On the Source and Influence of Malaria in the South-west.* By Dr. A. G. LAWTON, of Marshall, Missouri.

It was the opinion of Labaraque, that the effluvia arising from decomposing animal matter had no deleterious influence on the human constitution; in support of which able proof is adduced. (*Journal of Foreign Medicine* for 1828, vol. ii., page 381, E. Littell, Phila.)

This also was the opinion of Bancroft, and some others. Whatever combination of circumstances might be necessary to produce this poison, one thing is certain, that is, that water is one of the elements always necessary to its production; and that the water must be in small quantities, is evident from the fact, that the earth sends forth this effluvia in the greatest abundance in the last stage of its drying. I do not believe that decomposing animal matter will always necessarily produce it, for it requires a union of elements brought together under certain circumstances, implying a certain degree of heat, moisture, and matter, aided by a slow grade of decomposition, in order to the perfect development of this deleterious effluvia; hence Labaraque was right when he said as above quoted, he having reference to the *rapid* decomposition of dead bodies, for here we do not have the manner of decay, or the circumstances combined which are necessary to produce it.

What I conceive to be the most prolific source of malaria is, animal matter in minute fragments, mingled with vegetable matter in a process of *slow* decay. Where wash-water

is being constantly thrown out, around houses, in by and shady places, amongst rubbish, where old bones and vegetable matter are left to rot by slow degrees, it cannot fail, after a long time, to give rise to, or produce a pestilential effluvia, especially in very dry seasons; for it is generally the case that wash-water contains more or less animal matter, and that, too, of a kind favorable for the generation of miasmatic exhalations.

It will be found generally the case, that the sickly season does not commence until the thermometer falls a little from its extreme point, and the sky assumes that peculiar veiled appearance that it has in the latter part of the summer, and the autumnal months, or in very dry times. The fore part of the season is the healthiest part of the year, for the heavy rains and storms of the spring have swept all noxious matter from the air, and left it rightly and equally tempered. It generally happens, that as the drought increases the dews lessen, until the healthful moisture of the air is gone. Now, at this time, the intensity of the sun's rays is on the wane, for this occurs in the latter part of summer and fall, and the hottest days of the year are in the last of June and the fore part of July, and the most sickly time is in September, and sometimes in October.

When the dews begin to lessen a little, the sky assumes a dark or red appearance, and the sun's rays are a little blunted, as though its rays were in some way obstructed; until now, the evaporation from the earth's surface is not very poisonous, but now the evaporation from all the high lands, and drier part of the country, is very trifling, and daily lessen; and now the drought increases. At this time the water is mostly gone from the earth's surface; the ground parched by drought; the atmosphere already deprived of all healthy sources, whereby it might be supplied with moisture, at the very time when there is the greatest necessity for it; and this lack of humidity in the air must be supplied from some source, and this vacancy is soon filled up by an increased and rapid evaporation, from the half-dried swamps, stagnant pools, sinks, gutters, sewers, and from the banks and bottoms of streams, where the water has fallen and left the mud exposed; from these sources the moisture of the air is still maintained, and the atmosphere is still humid.

But now the equilibrium of the air is partially destroyed, it being over-dry in some places, and excessively humid in others; for this humidity is not like that humidity which

comes from clouds and storms of rain, which in itself is harmless, but it is a humidity formed of noxious vapors, constantly springing from decomposing matter; which, being either chemically united or mechanically mixed with some elementary principle evolved from decomposing matter, is thereby rendered much heavier than humidity from other sources, and becomes incapable of rising very high in the air, unless it is forced up by some fixed current of wind; and thus it happens that, under these circumstances, the atmosphere becomes unequally tempered. And now the moisture of the earth is so far exhausted on all the uplands, that it cannot afford much material for evaporation, and this process is of necessity limited to a small surface, that is, from swamps, marshes, ponds, streams, etc., from which places evaporation is very much increased, and the vapors rise in denser volumes, bringing up the poisonous exhalations from these places, where vegetation, flies and reptiles, have fallen and rotted for ages; where the matter, after being long steeped, is every year dried down, in the latter part of which process there is formed, and evolved from this mass, by the action or re-action of decomposing elements on themselves, a something which we call *malaria*, long known by its effect, being followed by a certain train of diseases peculiar to themselves, and known to be produced by no other morbid effect.

Now, under these circumstances, should the wind be low, which is generally the case, sometimes a dead calm prevails, or the wind sets lightly from an eastern direction, blowing with a current just strong enough to move the poisonous vapor from its resting place, and spread it over the country; and should this state of things exist long, and progress to an intense degree, a sickly time must inevitably follow; and when this state of things does progress to an intense degree, it is generally brought to bear most severely on the community in the autumnal months, increasing as the cold season approaches, or until some violent storm or frost occurs; when the reverse of this happens, the sickness of the season is very much modified, assuming less of an epidemic character.

I am convinced, from experiments and observations, that wood is capable of generating an immense amount of this poison; decomposition of the ligneous fibre is slow, and where it is long exposed to wet and dry, as in marshes, pools, and about houses, for many years, I believe it will produce a pestilential effluvia. If pools of water, standing

in the blue clay on these prairies, have nothing of the wood kind in them, the weather being very dry and hot, so the water does not move in or out of these pools, in two or three months the water becomes perfectly sweet and clear, and if it is not agitated from the bottom, it may be drunk or used with impunity; but if these pools contain logs, chips, brush, leaves, or wood of any kind, that is, old and in a decaying state, then the water never becomes either sweet or clear, but assumes a dark color, and the drier the weather, the blacker it gets, when it becomes an active and certain poison, producing on the human constitution sudden and alarming effects, accompanied with excessive vomiting and purging, extreme prostration, and death. And how much sickness there is produced by drinking water impregnated with this poison, is difficult to say, as water holds it in solution in every degree, from the minutest quantity, which would require years to affect the constitution, up to a degree of concentration sufficient to destroy life in a few hours.

The Indians suffer less from these causes than the whites, and the reason is obvious; they seldom live long in a place, constantly moving from one place to another, and often burn their tents, and erect new ones, and a fire is kept constantly burning in the centre of the tent, around which they sleep; they do not live long enough in a place for the accumulation of filth to become an effectual source of disease.

Although these countries, as a general thing, are not subject to extreme atmospheric vicissitudes, yet it sometimes happens that we have inflammatory diseases in the cold half of the year, as inflammation of the lungs, pleura, and the like; and although they occur at a season of the year when the air is free from all noxious exhalations, yet they generally assume that grade and type which is common to malarial fevers, and they generally fall most intensely on those living nearest the focus of miasmatic emanations; hence I count them as malarial; and taking this view of the subject, I have long since concluded to bleed less and give quinine more, and with this treatment I have been much more fortunate than when I used the lancet.

But antimony is our main reliance in these cases. Tart. antimony, judiciously administered, will seldom disappoint the physician's expectations. As soon as the pulse falls, and the expectoration becomes a little modified, I add quinine to the antimonial powders; and when the antimony is no longer indicated, I continue the quinine, combined with

ipecac., and sometimes Dover's powder. (My Dover's powder is made with the nitrate of potassa in place of the sulphate.)

I have only one thing more to add at this time, and that is, with respect to the use of quinine, combined as described in my former paper. (N. Y. Jour. of Med. vol. 8, p. 69.) Make a powder of quinine, camphor and pulvis Doveri, then the powder will contain quinine, nitre, opium, ipecac., and camphor; now, if you increase the ipecacuanha a little, you will have a better powder for winter fevers, for ipecac. increases the effect of quinine very much, especially in fevers that verge towards the continued type. I look upon opium and camphor as important additions to quinine, unless contra-indicated, and we seldom meet with a case where nitre is not admissible. In treating fevers, there are many indications to be fulfilled, some of which quinine alone would not effectually meet. Quinine sometimes operates too locally, and the addition of camphor gives it a more general searching effect; and if the effect should not be increased, I believe it is more effectual by being more particularly directed to certain indications to be fulfilled, which is just what we should be led to expect from a *priori* reasoning; and in addition to all this, it sometimes becomes necessary to add a more potent and diffusible stimulant, as brandy.—N. Y. Med. and Surg. Journal.

7. *On the Antagonism between Typhoid Fevers, Intermittents, and Phthisis.* By M. BOUDIN.

The following summary of M. Boudin's conclusions on this subject are given in a recent number of the *British and Foreign Review*. The facts are simple, and the sources from whence they are obtained sufficiently accurate to justify a reliance on the statements.

1. Those localities in which the producing cause of endemic intermittents thoroughly modify the constitution of man, are remarkable for the infrequency of pulmonary phthisis and typhoid fever.
2. The localities in which pulmonary phthisis and typhoid fever are particularly prevalent, are remarkable for the infrequency and mildness of intermittent fevers contracted on the spot.
3. The drying up of a marsh, or its conversion into a lake, diminishes or prevents intermittent fevers, but seems to dispose the organism to a new series of diseases, in which pulmonary phthisis and (according to the climate) typhoid fever are particularly prominent.
4. After a residence in a thoroughly marshy

locality, an individual enjoys an immunity from typhoid fever, the degree and duration of which is in direct proportion, first, to the length of the previous residence; second, to the intensity of the fevers proper to the locality, considered under the two-fold relations of form and type; third, or, in other words, that a residence in a country of remittent and continued fevers, such as certain points of the coast of Algeria, and the centre of the marshy part of Brasse, is more prophylactic against the disease referred to, than, for example, a residence near the marshy embouchure of the Bievre, at Paris. 5. The conditions of latitude and longitude, and of height (above the sea) which limit the manifestation of marsh fevers, equally limit the curative or prophylactic influence of the marsh miasm. 6. Lastly, certain conditions of race, and possibly of sex, diminish the susceptibility of the system to the cause of marsh fevers, and in equal degree diminish the therapeutic influence of that cause.

The subject of which M. Boudin treats has considerable practical value in the distribution of troops, and in the hygiene of those predisposed to consumption.—*Lancet. From ibid.*

8. *On the frequent occurrence of Alkaline Urine in Health, and the Errors of Diagnosis, occasioned by a want of knowledge of this fact.* By Dr. KRUKENBERG.

The fact, first promulgated by Wohler, that the internal use of salts of vegetable acids and fruits containing them, causes the urine to be secreted alkaline, has been too much neglected by succeeding physiologists and pathologists. Our author found that a much smaller quantity of fruit was necessary for the production of this phenomenon than has hitherto been supposed, viz.: 2 to 4 oz. of apple pulp, or 12 plums, weighing without the stones scarcely 1½ oz., sufficed to make the urine alkaline and hazy from phosphates, or if clear on excretion, heat caused their deposition; the addition of a little hydrochloric acid caused an effervescence like champagne; too much liquid, a bladder already filled with acid urine, or a disproportionate allowance of flesh, interfered with the success of the experiment. How often are those ill of chronic complaints who use a moderate diet, and with whom fruit is a useful and favorite article, troubled with hazy and alkaline urine, causing anxiety alike to themselves and their physician, which a little physiology does away with. In the simple chronic nephritis of Rayer, the chief symptom is the alkalinity of the urine; in no case

was there a *sectio cadaveris*; and some of the cases recovered so quickly, as to justify a doubt as to the correctness of the diagnosis; although he inculcates careful dietetic treatment, it is evident from his work that the semiotic influence of fruit in small quantities was unknown to him. This article is not forbidden at La Charité, and friends of the patients often carry them some. In several of his cases the alkalinity of the urine seemed to depend on purulent admixture, and consequent rapid putrefaction; and in one it seemed to be kept up, if not produced, by the use of an alkaline saline water (Contrexeville). The alkalinity of the urine has also been used by Prout as a diagnostic sign of certain spinal affections. These he divides into two great classes:—1st. Those arising from depressing emotions and weakening influences; and in these he recommends the use of fruit, and fluids containing malic acid, as cider and perry; to these, and not to any disease, our author refers the alkalinity of the urine. 2d. Injuries of the spine; our author states, that neither Rayer nor himself had ever been able to observe the urine alkaline in cases of injuries of the spine, unless there were some existing or consecutive affection of the mucous membrane of the urinary passages, producing purulent admixture, hastening thereby the putrefactive changes in the urine. In the three cases detailed by Prout, two had stricture of the urethra, and the third retraction of the testicle, and a mucous sediment—all bespeaking the existence of some such affection. A microscopical examination, by showing the existence or absence of pus-cells in the urine, would have confirmed the diagnosis, or at once corrected it. How far inattention to diet may have led to error, cannot be specified. Prout also mentions, without explanation, what has already been referred to, viz.: That although alkaline urine, by copious secretion, be clear and bright, yet boiling causes it to deposite a phosphatic sediment, which falls without any such previous process, if the secretion be more sparing; the phosphates separate before the boiling point, and from their great specific gravity fall rapidly, and may thereby, as well as by their solubility in acids, be distinguished from the albumen found in Bright's disease.—*Month. Jour.*, Aug. 1847. *From ibid.*

9. *Cause of Mortality in Still-born Children.* (Ranking's Report in Abstract, January to July.)—The causes of deaths in still-births, with the means of preserving the infant's life, have been made the subject of an ingenious brochure by

Dr. Richard King, in which the author endeavors to show that the mortality arises from syncope, and not from asphyxia, as is commonly thought to be the case; and that the great danger to be dreaded in tedious or abnormal labors is not the compression of the cord so much talked of by accoucheurs, but its non-compression; so that the foetal blood, as the placenta becomes detached, is, as it were, sucked up by that body, and the child is in fact thus, to all intents and purposes, rendered ex-sanguine. The treatment which the author suggests, as indicated by this theory, is the compression of the cord under certain circumstances, so as to prevent the possibility of that congestion of the placenta which he regards as the active cause of the death of the still-born infant. The arguments upon which the author founds his opinions are selected with judgment, and the work is altogether worthy of the best attention of the obstetrical practitioner.—*Ibid.*

10. *Abortion, and Menstruation during Pregnancy.*—[Mr. Whitehead, in a recent work on the Physiological and Morbid Conditions of the Uterus and their relations to the Treatment of Abortion and Sterility, when treating of Abortion, lays down the three following positions from the cases narrated:]

1. That what is commonly called ulceration of the cervix uteri may be the predisposing, as well as the immediately exciting cause of abortion.

2. That the purulent product of uterine ulceration, under some forms, at least, possesses virulent properties, capable of producing disease in another individual, or in another part of the same individual by inoculation; and probably capable also, by being absorbed into the circulation of the same person, of materially disordering the fluids, and of creating thereby a peculiar susceptibility to disease.

3. That the application of caustic to the uterus, and the employment of other active measures which I have heard practitioners object to during pregnancy, as likely to endanger the well-being of the offspring, may not only be safely administered, but that they constitute in fact one of the principal means of securing both mother and child from danger.

[In relation to menstruation during pregnancy, the following are his conclusions:]

1. That menstruation during pregnancy is, for the most part, perhaps always, associated with an abnormal condi-

tion, generally with ulcerative disease of the uterus, requiring at all times active remedial treatment.

2. That hemorrhage during pregnancy is not necessarily associated with an altered relation of the parts within the uterus, and, by timely care, need not interfere with the integrity of the ovum.

3. That menstruation, during the early periods of lactation, is not always natural menstruation, but that it is generally associated with morbid conditions which are amply adequate to the satisfactory explanation of the phenomenon; that secondary hemorrhage is, in the majority of instances, not owing to imperfect contraction, or atony of the uterine fibres; and that the discharge very probably proceeds, under these circumstances, not from the inner surface of the uterus, but from the diseased surfaces, situated upon parts external to the cavity of the organ.—*Ibid.*

11. *The case of Mr. Whitman.* (From the Portland Argus.)

The case of the late lamented Rev. Jason Whitman, who died in this city, of pleurisy, has excited more than usual interest. It was known to his friends that from early infancy he had suffered from a peculiar cough, and copious muco-purulent expectoration. He seemed predisposed to pleurisy, from which he had suffered several attacks.

The peculiar symptoms of his case, led him to suspect there might be some malformation, which must preclude the hope of perfect health; and he expressed the wish, that, at his decease, a post-mortem examination might be made. It is believed that a short description of this wonderful case may be interesting to your readers.

The examination was made by myself, in the presence of Drs. S. Weed, A. Rea, Wm. Wood, J. T. Gilman, J. T. G. Daveis, M. Dodge, and L. Fitch; and Wm. Willis and Martin Gore, Esqs.

When the lungs were exposed, they were observed to be united by old firm adhesions, laterally to the pleura covering the ribs—and below to the diaphragm. These adhesions gave proof of previous attacks of inflammation. At the inferior part of the left lung was a deposit of pus—the result of the last attack of disease. This was contained in a small sac formed by the pleura of the lungs on the one side, and of the ribs on the other side, and the only part in both lungs not previously bound to contiguous parts by strong adhesions.

The two lobes of the left lung filled the left cavity of the thorax. The heart was in the right cavity, having its apex or small end inclined to the right, and not towards the left side, as in the natural position. The right lung has three lobes; in this case there were only two; the place of the third being occupied by the heart.

The liver was in the left side, of nearly natural size, and perfectly reversed from—united to the left, and not to the right hypochondrium. The position of the stomach was reversed, the small end to the left, and the large end towards the right side. The spleen and larger end of the stomach occupied the place usually assigned to the liver. The large intestines, always found on the right, were here situated in the left side of the abdomen, and passing from left to right, instead of their natural reversed direction, from right to left. The sigmoid flexure, always in the left, was in this case found in the right side. All organs of the abdomen were healthy, and their form perfect, but reversed. The great omentum, or caul, was wanting. The other organs examined were natural in form and situation.

It was matter of regret that time did not allow us to pursue the examination of the arteries, as peculiarities in his pulse had been observed during life, which might perhaps have found a solution. So strange a natural position of so many important organs was never before seen by any of the physicians who witnessed the examination.

Yours, E. CLARK.

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12. *The Bite of the Rattlesnake.* By CHAS. A. PHELPS, M. D. (Communicated for the Boston Medical and Surgical Journal.)

The fate of the late lamented Dr. Wainwright, of New York, gives at this time a sad interest to inquiries on this subject. In the account of his case published in the newspapers, the full details of his treatment are not given. There is one remedy, however, which appears deserving of further trial. I refer to olive oil.

In the Philosophical Transactions of the Royal Society of London, for the year 1734, mention is made of a viper catcher, who having been frequently bitten, had always cured himself with sweet olive oil. He was induced to make trial of its effects at a meeting of the Royal Society. Stripping his arm, he compelled the enraged animal to strike him forcibly. The poison was allowed to act upon his system until his head, face and tongue were greatly

swollen, his face and arm quite black, and his senses much affected. Oil was then given internally, and the wound freely bathed with the same, after which he gradually but soon recovered. In the same volume an account is furnished of some experiments made subsequently at Oxford, in which a viper could not be made to bite a part of the hand which had been smeared with oil, although it did so readily after the oil was removed. These undoubtedly were the common English vipers—the coluber berus of Linnæus.

In Vol. II., No. 2, of the Medical Repository, published in New York in 1798, an article is found narrating its use in South Carolina in 1786, in the case of a woman bitten by the deadly rattle-snake of our country (the crotalus of Linnæus.) In this instance the head and face were greatly swollen, the tongue swollen and protruded, the face black, the senses affected, and extreme difficulty in respiration. Two drachms of olive oil were administered internally, followed by an immediate abatement of the symptoms, and in thirty minutes by emesis and dejections. After this she became rapidly convalescent, and soon wholly recovered.

To come nearer home, I would mention a case related to me several years since by Dr. A. Phelps, of this city. It was that of a man who had some fifty rattlesnakes which he exhibited. Imprudently exposing himself on one occasion, he was severely bitten in the hand. The usual symptoms immediately manifested themselves. Olive oil was given internally, and the hand and wrist immersed in the same for twelve hours. In a short time after the oil was exhibited, the symptoms subsided, and the following day the man was as well as usual.

This remedy was used successfully at Dresden by Dr. Vater. Also in England by Mr. Oliver (for the history of his experiments, see Philosophical Transactions, Volume XXXIX). It is said to have been used ineffectually at Paris by Messrs. Geoffroy and Hunauld, of the Royal Academy. Combined with ammonia it was highly recommended by the celebrated Bernard de Jussieu. Dr. Mead tells us that the viper catchers in England used, as a specific upon which they placed the greatest reliance, the *argungia* of the viper rubbed into the wound. The ointment of M. Gondret was prepared with oil of olives, 3 ss.; tallow, 3 ss.; ammonia, 3j. Orfila, in his work on Poisons, recommends the application of heated olive oil to the wound. The famous *eau de luce*, which was attended with success

in the hands of de Jussieu and M. Sonnini, the latter of whom, in his Travels in Greece and Turkey, details an interesting case of a child cured by its use, is well known to have been composed of oleum succini in union with a volatile alkali. Is it not probable that these remedies acted in a similar manner to olive oil itself?

It is not necessary to speak here of the various other remedies advised in the treatment of these venomous bites. It is to be regretted that opinions on this subject are so unsettled, and that more satisfactory results have not been always reached. I would ask, however, if the foregoing does not warrant a further use of olive oil. Whether any resort was had to it in the case of Dr. W. before alluded to, I am not informed. Boston, January 14, 1848.—*Boston Med. and Surgical Journal*.

13. *Nitrate of Silver in Membranous Croup.* To the Editor of the Boston Medical and Surgical Journal.

Dear Sir,—The reading of the case of membranous croup, treated with nitrate of silver, reported by Dr. C. E. Ware in your Journal, No. 21. vol. 37, has induced me to send you the following case, which came under my observation, for insertion in the Journal, if you think best.

On the 23d of November last, I was requested to visit H. P., aged about 15 years, laboring, as her parents supposed, under a severe and protracted cold. Her disease, in fact, was *cynanche trachealis*, evidently, in my mind, to prove fatal soon, unless something could be done to remove the *false membrane* which had been formed, nobody knows how long. It was a case characteristic of croup in its last stages; face flushed and swollen; eyes protuberant; breathing was performed with a frightful hissing noise; pulse 110 in a minute. Gave her an emetic immediately, which gave temporary relief. Ordered onion poultice to the neck, and prescribed such other medicines as in my judgment were called for. This was in the evening. Visited her the next morning. As I anticipated, I found her no better. Could hear her breathe, although in an adjoining room with closed doors. Realizing sensibly, that her case would prove fatal, unless some more efficient means could be devised, I resolved, as a *dernier resort*, to make use of a strong solution of nitrate of silver. It was accordingly prepared, and a spongy substance, well saturated with it, was introduced low down into the trachea. The breathing presently grew worse; but within an hour looseness seemed to take place,

which promised relief. Considerable slimy, ropy matter was got rid of, which, as the saying is, seemed to come from the "right spot," and within an hour and a half from the time the solution was made use of, a piece of false membrane was thrown off, an inch long, hollow, tube-like. The effect was immediate relief. Her breathing, which was distressingly performed but a short time previously, was now nearly natural, and she could talk distinctly, which she had not done for many days before.

So much for the nitrate of silver in this case. What it will do in all similar cases, I cannot say. At any rate, if one presents itself, which I sincerely pray never will, I shall most assuredly give it a fair trial. In conclusion, I would say, that I have not the least doubt that it saved the life of the patient above referred to.

L. ALDRICH.

Reading, Vt., Feb. 1848.—*Ibid.*

14. *Second Advent of Thomsonism.*—That nothing may be wanting, in the metropolis of New England, to meet all the whims and caprices of all classes of society, the whole Botanico-Medical College of Ohio (supposed to be Thomsonian)—that is, its faculty, which embraces the lion of the party, the chancellor of the University himself—have been transferred to Bromfield street, Boston, within a stone's throw of the Medical Journal office. Five lectures are to be given daily. What is to become of that monster of a Cayenne College at Worcester, Mass., which was to swallow up all the venerated institutions of medicine in Massachusetts?—It is evident that the two will soon be at loggerheads, since the Worcester gentlemen, who predicted the infliction of a Thomsonian governor over the Commonwealth, in 1849, in case a charter was refused them, will logically demonstrate that these Buck-eye botanics are trenching on their own hallowed ground. For ourselves, not the least fear is entertained of the efforts of these loud-talking strangers. It was benevolent in them to commence operations in Boston, the focus of Thomsonian ignoramuses. If it is possible to enlighten the latter, the attempt should be made, as they actually disgrace their calling. It is generally supposed that all who practise, as these New England one-idea lobelia people do, are equally stupid; and if measures are in progress for letting light in upon their No. 6 minds, all well wishers to humanity will hail the intelligence with delight. After hearing some of the lecturers from Ohio, a further

notice may be given of their character and tendency.—*Boston Medical and Surgical Journal.*

15. *Surgical Co-apter and Splints.*—A medical student, Mr. Oliver D. Wilson, of West Boylston, Mass., has invented and secured a patent for reducing dislocations, which he calls the Co-apter, accompanied by a variety of curiously constructed splints, made of iron. He has certainly hit upon something that merits attention. He appears to have been led to the invention in consequence of the high cost of other kinds of surgical adjusters. The new instrument seems to accomplish the same result that is attained by other approved ones, and by a simplicity of mechanism that leads one to wonder that the principle on which it and others operate, was not discovered long ago. Without attempting a description, which we could not easily give, it may be proper to observe that the inventor proposes to publish an account of the peculiar properties of each article, accompanied by drawings, when the subject may again be called up by ourselves.—*Ibid.*

ANNUAL MEETING.

The Wisconsin Territorial Medical Society convened at the Capitol, on Tuesday, the 25th of January, A. D. 1848.

On motion of Dr. E. A. Mulford, from Walworth, adjourned to Wednesday, the 27th of February.

Pursuant to adjournment the Society met.

On motion of Dr. H. Clark, from Walworth, Dr. Mason C. Darling was appointed President, *pro tem.*

On motion of Dr. C. B. Chapman, of Madison, Dr. Eliab M. Joslin, from Lake Mills, was elected a permanent member of this society.

On motion of Dr. H. Clark, Dr. F. G. Newell, from Racine, was elected a permanent member of this society.

Dr. John Bristol, of Portage, and Dr. Jesse Moore, of Rock, were by vote excused from attendance, they having rendered a satisfactory excuse for their absence.

The society proceeded to the election of officers for the ensuing year. Whereupon

Dr. John B. Dousman, of Milwaukee, was chosen President, and Dr. L. B. Brainard, of Sheboygan, Vice President.

Dr. C. B. Chapman, of Madison, Recording Secretary, Dr. B. B. Cary, of Racine, Treasurer.

Drs. E. B. Wolcott and L. S. Hewett of Milwaukee, and Dr. O. N. Blanchard, of Racine, Censors.

Dr. Jesse Moore, of Rock, Corresponding Secretary.

On motion of Dr. Clark, voted that five delegates be elected to attend the meeting of the American Medical Association at Baltimore in May next.

The following gentlemen were chosen such delegates, viz: Dr. Mason C. Darling, of Fond du lac; Dr. Jesse Moore, of Rock; Dr. E. B. Wolcott, of Milwaukee; Dr. Henry Clark, of Walworth, and Dr. B. B. Cary, of Racine.

On motion of Dr. Newell, the following was also adopted.

Whereas, pure and unadulterated articles of medicine are all-important to the life, health and safety of the people of the United States; and whereas, impure and adulterated articles of medicine are constantly being imposed upon us, therefore

Resolved, That the Territorial Medical Society of Wisconsin, respond to the call of the New York College of Pharmacy in its organized capacity, in memorializing Congress that a law may be enacted that all imported articles intended for medical purposes, which may appear at the custom houses of the United States, shall be subject to inspection and analysis by two or more competent chemists, and if found to be impure and adulterated, to be confiscated and destroyed.

That the President be requested to deliver an address before the Wisconsin Territorial Medical Society at its next annual meeting.

On motion of Dr. Clark, the society then adjourned.

MASON C. DARLING, *Pres't. pro tem.*

C. B. CHAPMAN, *Secretary.*

—*Madison Argus.*

17. *Abdominal Tumor mistaken for Pregnancy.* By JOHN CHALLICE, Esq. (*Lancet*, Oct. 16, 1847.)

[The following case is one of great practical value, and displays forcibly the great difficulty which surrounds the diagnosis of pregnancy. It would, perhaps, be difficult to meet with an instance affording stronger circumstantial evidence of that condition.]

Mr. Challice received an urgent message to visit a young lady, said to be laboring under cholera, but from hints received from the maid-servant he was induced to suspect the possibility of pregnancy.

When he arrived he saw a young female in bed, lying

on her right side, with her face buried in the pillow, and the knees drawn up towards the abdomen. She seemed to be in pain, but was sullen, and refused to answer any questions. The mother stated that she had been vomiting, and complaining of pains in the loins, with a constant desire to pass water, and that for the last five or six months she had observed a change in her daughter—the appetite capricious, temper irritable, and on several occasions she had been surprised in tears; notwithstanding, she denied being ill, and continued to perform her domestic duties. These facts seemed confirmatory of the servant's suspicions, and with almost a conviction in his mind of the condition of the girl, the author placed his hand upon the abdomen; it was tense and swollen, and a movement like that of a living foetus was distinctly felt; he then listened and detected a loud and quick pulsation.

The presence of these symptoms induced him to pronounce the patient pregnant. No suspicion had entered the mother's mind; she was an only daughter, and bore an excellent character. However, she did not deny the fact, but after a distressing burst of grief, and a pitiable appeal for forgiveness, she confessed that her cousin had had connection with her once, and only once, about six months before, a few days previous to his departure from England. Being unwilling to aggravate her sufferings by what appeared unnecessary enquiries, or disturb the patient by further and more careful examination, considering the case quite decisive, Mr. Challice contented himself with prescribing some simple remedy for relieving the sickness and pain. The next day there was a great improvement in the condition of the patient; the fear of discovery no longer agitated her, and she had been forgiven. Up to this period she had so contrived to compress her figure, that no increase in her bulk was perceptible when dressed, although her size was quite that of the six month of gestation when undressed. Now that this cruel mental and physical restraint no longer tormented her, she suffered less from pain and sickness, became less sullen, and more communicative.

It appears that the connection took place, after prolonged resistance, just previous to the usual period of menstruation; that up to that time there had never been the least irregularity of this function during the three years she had menstruated.

She was greatly alarmed at the absence of the accustomed appearances at the usual time, and did not feel well

in health, although she had no marked symptoms; a general sense of uneasiness, with pains in the loins, and an occasional slight feeling of sickness and loss of appetite were felt. When the next period came round, she was pleased at finding herself "unwell," but only to about half the usual extent; menstruation had continued regularly up to the time Mr. Challice saw her; on each occasion, however, more and more scantily. The abdomen had gone on gradually increasing in bulk, and about five months after the connection the patient was conscious of a movement and pulsation in the abdomen, and believed herself pregnant. The breasts were small, and marked with an indistinct areola; around the eyes and mouth there were dark circles, and her mother said she had fallen away in flesh. Previous to this unfortunate occurrence, the patient not only enjoyed good health, but was remarkable for strength, endurance, and activity, inclined to *embonpoint*, full of life and spirits, and in her nineteenth year.

During the next month or six weeks Mr. Challice saw the patient occasionally. She complained of no urgent symptom, walked out now and then, had a good appetite and digestion, with sometimes slight irritability of the bladder, and irregularity of the bowels. The gradual increase in size still went on, and the mother (who now slept with the daughter) said that the movement of the child continued. The patient complained of its violence when in bed, and began to suffer from lumbar pains and constant irritation of the labia, which was much increased when she drank beer, wine, or spirits. And so the case went on.

When the ninth calendar month had nearly expired since the connection, Mr. Challice became much interested in the case, thinking it one in which the period of gestation could be accurately ascertained.

On the evening of the expiration of the ninth month the author received the expected message, with an urgent request to hasten, as very strong labor had come on. When he arrived the patient was standing at the foot of the bed, grasping the bedpost, and evidently suffering from pain, although not of a violent character. There was an interval of about ten minutes in the pains, during which she walked about the room, having a very anxious and haggard look.

After a good deal of persuasion she consented to an examination *per vaginam*, which seemed to cause excessive pain, as she screamed violently, and exclaimed that she

was being murdered. At the time, the author thought the patient hysterical, but was much surprised at the narrow constricted condition of the vagina, and the presence of the hymen nearly perfect; the agony, however, produced by the examination, seemed so intolerable, that the patient, by a sudden and violent effort, threw herself from him, declaring that he should torment her no more.

Finding that the pains were weak and ineffectual, and at longer intervals, and feeling assured, from the condition of the parts, that immediate labor was not at hand, the author gave twenty minims of opium, and left, directing a full dose of castor oil to be given in a few hours. During the night she slept well; the oil acted freely in the morning; and the next day passed over without pain or any inconvenience, the patient having a good appetite, and being better in spirits. About eleven o'clock at night the pains returned with increased violence, and he found her straining and bearing down at the bedpost. An old experienced nurse declared "that the pains were quite strong enough, with assistance, to bring the child into the world." The mother states, that during the night she had placed her hand on her daughter's stomach, and felt the child move vigorously.

In the intervals of pain the patient walked about the room, and was cheerful, except expressing what seemed to be an unreasonable horror at any examination. The pains commenced in the abdomen, and then extended round to the loins, came on regularly every ten minutes, and were marked with all the characteristics of labor in first stage.

The extreme excitement and dread which the patient evinced when the necessity for an examination was impressed upon her induced the author to waive it, although he was anxious to ascertain the real condition of affairs. It would be useless to detail the diurnal symptoms; suffice it that a week passed over, and matters remained apparently without alteration either one way or the other. I may here state that menstruation did not take place at this period. Doubts now began to rise in the author's mind about the nature of the case; and, when nine calendar months from the departure of her cousin had expired he became very anxious about it. It was at this stage that Dr. Lever was consulted. After a careful and thorough external and internal examination, this gentleman, justly famous for his skill and tact in diagnosis, having the history of the case before him, came to the conclusion that it was

"extra-uterine impregnation." At that time her physical condition was as follows:—Countenance pale, an anxious expression; eyes rather sunken; nose pinched; breasts somewhat flaccid; abdomen the size of mature pregnancy, if not larger; bowels sometimes costive for a day or two, at others times the reverse; urine most frequently pale and copious, but on some occasions thick, scanty, and high-colored. Over the entire abdominal region a distinct pulsation could be heard and felt; but owing to the extreme excitability of the patient it was almost impossible to ascertain whether or not it was cynchronous with the pulse. Palliative measures were adopted, and the case, now become one of painful interest, was closely watched. During the next fortnight no perceptible alteration occurred, except that the pulsation in the tumor became less distinct, and the abdomen more tense. Dr. Ferguson now visited the patient, and pronounced the abdominal pulsation to be synchronous with the heart's action, and doubted whether impregnation had taken place at all. On his recommendation the author punctured the abdomen with a fine "trochar," and drew off about five pints of thick grumous and offensive matter. Great relief followed the operation, only, however, temporary; for in the course of a short time the abdomen became as tense as before, and all the patient's sufferings returned. The interest, in a further detail of the symptoms of this case, here ceases, no doubt now being entertained of its character. After a second and third tapping, the poor girl gradually got weaker and weaker, her only comfort the oblivion produced by anodynes; and on the 15th of February she died.

The day following assisted by Mr. Druitt, a post-mortem examination was made. The upper portion of the body was extremely emaciated, but owing to slight œdema of the lower extremities, this appearance was not general. Abdomen greatly distended, and marked by enlarged veins; it measured in circumference fifty-eight inches. About a gallon of fluid was drawn off by the trochar, previous to making a free incision, after which nearly a pailful of brain-like matter rolled out. This had been contained in a cyst, which extended from the pubis to the ensiform cartilage, and from the left to the right hypochondrium; in some parts the walls of the sac were more than an inch thick, and of a fibro-cartilaginous consistence; the anterior portion adhered firmly to the abdominal parietes, the upper being formed by the inferior surface of the liver; that organ was

bathed with the contents of the sac, and became inoculated, several small cysts, filled with medullary sarcoma, having formed in its substance. There were, also, many isolated cysts, varying from the size of a hazel nut to that of a pigeon's egg, formed in the walls of the cyst; these had no connection with each other, or communication with the general cavity. The uterus was found imbedded in the lower portion or base of the cyst; no trace of the ovaries could be met with; the bladder was small, but not affected by disease.

The peculiar interest of this case arises from the close resemblance to the symptoms of impregnation; the development of a malignant disease seeming, in a great measure, to be influenced by the feelings or instinct of the patient. The author asks, would the girl have died had no connection taken place? How far did the mental and physical excitement act upon the origin or the progress of the disease? Or was it completely independent and its course inevitable?

[It is not improbable that the ovarian excitement, connected with the act of copulation, was the starting point of the disease.]

PART V.—EDITORIAL.

ARTICLE I.

OUR JOURNAL.

Our Journal, as will be seen by the prospectus accompanying this the last number of the volume, is to be continued hereafter, as the North Western Medical and Surgical Journal, a title suggested by a number of our friends and patrons, as the most appropriate one for a medical periodical intended for and sent already into all parts of the North West to more than six hundred subscribers.

In view of the liberal patronage already extended to us, we are led to anticipate a large addition to our subscription list during the coming year, and in order to meet the demand we shall print at least 1000 copies of the forthcoming volume, at an additional expense, which can only be met by an extended circulation and prompt payment, especially from those still in arrears for the volumes already published.

We shall endeavor on our part, by renewed efforts in furnishing matter and making selections, such as will be most useful and interesting to north-western medical men, to sustain the present character of our Journal for being peculiarly well adapted to the wants of practitioners in this region.

All we ask is a continuation of the disposition now manifested by the profession, to aid us in furnishing interesting matter for publication, and the payment voluntary of the small amount required annually to "pay the printer."

Subscribers who are still indebted for the volume just completed, or the preceding one, will receive their bills with this number; and unless prompt payment is made, we shall be compelled in order to pay expenses, to place them at once in other hands for collection.

Payments, made by mail at our risk, will be acknowledged in the list of receipts, which will be published hereafter, from time to time, upon the cover of the Journal.

ARTICLE II.

INDIANAPOLIS MEDICAL SOCIETY.

The Physicians of Indianapolis, Indiana, have organized a Medical Society, under the above name, which is to be composed of the regular practitioners of medicine of Marion and the adjacent counties.

Dr. J. H. Saunders, President; Dr. L. Dunlap, Vice President; Dr. J. S. Robbs, Recording Secretary; Dr. T. Bullard, Corresponding Secretary; and, Drs. G. Mead, C. Parry, and L. Dunlap, Censors. Its meetings will be held on the evening of the first Saturday of every month.

We are glad to see the profession organizing in different parts of the country. It shows a spirit of improvement, and cannot have other than a good effect, when a desire to advance in knowledge and improve in social intercourse is the object of association. E

ARTICLE III.

CHLOROFORM—THE NEW ANÆSTHETIC AGENT.

Our exchange journals, received since our last issue, are full of reports from various sources, and correspondence between eminent medical men, on the subject of the anæsthetic agent—chloroform.

In our last number, we laid before our readers all that had been received by us on the subject, which, however, only amounted to an announcement of the discovery and a very faint outline of its effects. The amount of matter now before us, which has accumulated since then, is so great, that were we to give but a part only of them in our department of selected matter, we should have but little room for other matter. We shall accordingly endeavor to present, in a condensed form, the most important results that have been deduced by observation and experiments, in regard to the history of chloroform; its uses in the different departments of practice; effects compared with ether; the

best mode of inhalation ; its physiological action, and the dangers to be apprehended from its use, &c., &c.

Composition.—Chloroform is chemically the "Sesquichloride of Formyle." Formyle is the hypothetical radical of formic acid, which takes its name from having been first obtained from the red ant. Formic acid contains carbon 2 equivs., hydrogen 1, oxygen 3. Replace the three equivalents of oxygen by chlorine, and we obtain C 2, H CL 3, the composition of chloroform.

History.—It was discovered in 1831, by E. Soubeiran, chief pharmacian to the hospitals of Paris ; about the same time by Liebig, in Germany, and Mr. Guthrie of our own country. A number of the foreign reports fail to mention the name of Mr. Guthrie as one of the discoverers of chloroform. An account of his discovery was published in Silliman's Journal, (in vols. 21, 22, 1832,) and is mentioned in Wood & Bache's Dispensatory, under the head of "chlorine ethers," in the appendix to the edition published in 1839.

While others are contending for the honors of the discovery, American journalists should not allow the merits of their own countrymen to be overlooked. The chemical constitution of chloroform was first investigated by Dumas, who also assigned to it its present name. Flourens is said, by the French, to have been the first to describe its anæsthetic properties. In a paper presented to the Academy, March 8, 1847, he announces the effects of the inhalation of chloroform on a rabbit. He says at the end of some minutes it "was entirely etherized." "The spinal marrow was exposed and the posterior cords were insensible." Three out of the five of the anterior cords "had lost their *motricité*." Professor Ives and Dr. N. B. Ives, of New Haven, speak favorably of its effects internally. The U. S. Dispensatory (*loc cit.*) has this remark : "In affections characterized by difficulty of respiration it may be used by *inhalation*." All agree, however, in awarding to Prof. Simpson, of Edinburg, the merit of having been the first to use it on man for producing insensibility to pain ; to him alone, then,

is due its general introduction as an anæsthetic agent. Dr. S. having used the ether in obstetrical practice, found it liable to several objections; a liability to produce bronchial irritation; its disagreeable and persistent odor, &c., &c. He accordingly tried a number of other volatile fluids said to possess agreeable odors, among others, at the suggestion it is said of Mr. Waldie, chloroform, which alone gave perfect satisfaction. The first public notice of the new agent was made by Prof. S. in a paper read before the Medico-Chirurgical Society of Edinburg, on Nov. 10, 1847.

Preparation and mode of determining its purity.—Chloroform has been prepared by several different processes. The most economical and simplest, is by the action of chloride of lime upon alcohol, pyroxylic spirit, or acetone. The essentials to its production appear to be the action of chlorine on certain hydro-carbons in the presence of an alkaline base. It is highly important that the product should be carefully freed from the presence of all other compounds. Professor Simpson's formula is perhaps the best. We have used it in our own experiments and find it succeeds well. We give it as communicated by Prof. Simpson to Prof. Meigs, of Philadelphia.

"The following is the formula for chloroform, communicated by Professor Simpson:

"Take of Chloride of Lime in powder,	4 pounds.
Water,	12 "
Rectified Spirit,	12 fluid ounces
	"Dumas."

The chloride of lime and water being first well mixed together, the spirit is added. Heat is then applied to the still, (which ought not to be more than a third full,) but as soon as the upper part of the still becomes warm, the heat is withdrawn and the action allowed to go on of itself. In a short time the distillation commences, and whenever it begins to go on slowly the heat is again applied. The fluid which passes over separates into layers, the lower of which is chloroform. This, after having been separated from the weak spirit forming the upper layer, is purified by being mixed with half its measure of strong sulphuric acid, added gradually. The mixture, when cool, is poured into a

leaden retort, and distilled from as much carbonate of baryta by weight, as there is sulphuric acid by measure. The product should be allowed to stand over quicklime for a day or two, and repeatedly shaken and then redistilled from the lime."

In conducting the above process a very capacious vessel must be used; the materials foaming very much during the escape of the chloroform. The vessels used should be of glass, earthenware, wood or lead, for the first process, and of glass for the purification. In the specimens we have ourselves prepared and used, we have omitted the distillation with sulphuric acid. The only impurity we have to suspect being alcohol, the presence of which we are well satisfied is the principal cause of the unpleasant, dangerous and stimulating effects of the impure specimens, we have uniformly adopted washing with distilled water with subsequent distillation, at a very gentle heat, as the sole mode of purification, and have reason to believe that a good article is thus obtained. The washed chloroform may be separated from the water, by subsidence and withdrawal by a pipette, the lower stratum being of course the chloroform. It is stated in a French paper that the stinging sensation which the chloroform produces upon the lips and other delicate parts with which it may once in contact, results from the presence of absolute alcohol. The same report also states that the best test for the purity of the article is derived by dropping the chloroform into water and agitating it. If pure it subsides to the bottom, remaining transparent, and leaving the water, also, transparent; if impure a milky cloud is produced in one or both strata. We recommend our readers to apply this test before using any specimen they may obtain, as the high price of the pure article may render it an object to adulterate it.

Comparison of the effects of Chloroform and Ether.—Prof. Simpson, in a communication to the Medico-Chirurgical Society, of Edinburgh, thus compared the effects of these two agents.

"As an inhaled anæsthetic agent, it possesses, I believe,

all the advantages of sulphuric ether, without its principal disadvantages.

1. A greatly less quantity of chloroform than of ether is requisite to produce the anæsthetic effect, usually from a hundred to a hundred and twenty drops of chloroform being sufficient, and with some patients much less. I have seen a strong person rendered completely insensible by seven inspirations of thirty drops only of the liquid.

2. Its action is much more rapid and complete, and generally more persistent. I have almost always seen from ten to twenty inspirations suffice, sometimes fewer. Hence the time of the surgeon is saved; and that preliminary state of excitement which pertains to all narcotizing agents being curtailed, or, indeed, practically abolished, the patient has not the same degree of tendency to exhilaration and talking.

3. Most of those who know from previous experience the sensations produced by ether inhalation, and who have subsequently breathed the chloroform, have strongly declared the inhalation and influence of chloroform to be far more agreeable and pleasant than those of ether.

4. I believe that, considering the small quantity requisite as compared with ether, the use of chloroform will be less expensive than that of ether, more especially as there is every prospect that the means of forming it may be simplified and cheapened.

5. Its perfume is not unpleasant, but the reverse; and the odor of it does not remain for any length of time attached to the clothes of the attendant, or exhaling in a disagreeable form from the lungs of the patient, as so generally happens with sulphuric ether.

6. Being required in much less quantity, it is much more portable and transmissible than sulphuric ether.

7. No special kind of inhaler or instrument is necessary for its exhibition. A little of the liquid diffused upon the interior of a hollow-shaped sponge, or a pocket-handkerchief, or a piece of linen or paper, and held over the mouth and nostrils so as to be fully inhaled, generally suffices in about a minute or two to produce the desired effect."

All observers, whom there is reason to believe have used a pure article, coincide with these remarks of Prof. S.; where a difference is observable in the reports, it in all probability is referable to the use of an adulterated article or to a difference in the mode of inhalation. The mode of inhalation preferred by the discoverer, it will be perceived,

avoids the use of all instruments. He prefers as stated by him in other places the silk pocket handkerchief made up into a cup-shape. The use of the inhaler we can readily conceive may produce bad effects in two ways:

1. By not admitting sufficiently freely the oxygen of the air, and, consequently, producing partial asphyxia, together with the normal effects of the chloroform.

2. By permitting the accumulation in the sponge of the instrument, of adulterations less volatile than the chloroform.

In the latter case, the first individuals would inhale the almost pure vapor and experience effects more or less nearly approaching to normal, accordingly as the specimen was more or less pure. Those, however, who should inhale from the instruments after prolonged use, would breathe a mixed vapor of chloroform and of the less volatile liquids present, from which the pure effect could scarcely be expected. We have frequently breathed by means of a tube, from a bottle containing a solution of chloroform in alcohol; the first inspirations had the odor, taste and effects of almost pure chloroform, but after a time, the vapor of alcohol predominated and ultimately was left by itself.

Uses of Chloroform in the different departments of practice of Medicine and Surgery.—The advantages derived from the use of the agent in *surgical operations* is now established beyond controversy. The journals are full of evidence on this subject, from the hospitals on the continent, in the British Isles, and in America. It is stated that aside from the freedom from pain, patients recover more rapidly, and the average success of operations is increased.

In *obstetrical practice* the evidence is strong in favor of its use. Professor Simpson states that recently he has used it, with few and rare exceptions, in every case of labor which has been under his care, and the results have been most happy and gratifying. "I never," says he, "had the pleasure of watching over a series of more perfect or rapid recoveries; nor have I once witnessed any disagreeable results to either mother or child." Reports from other sources bear testimony to the same.

In *Insanity*, though evidence is wanting to prove chloroform a *curative* agent in chronic cases of mania, it is shown to be exceedingly valuable. In cases of dementia with excitement and wakefulness it has produced a good effect.

In *Delirium Tremens* it has produced critical sleep and apparent cure. In *puerperal mania* it has procured sleep and calmed the excitement so as at least to aid in the cure.

Professor Simpson recommends it as an *antispasmodic* in asthma, laryngismus, tetanus, whooping-cough, dysmenorrhœa, colic, and the pain attending the passage of biliary calculi. As a *diffusible stimulant*, in *small doses*, to arrest the commencement of ague, in hysteria, &c., and as a narcotic in neuralgia.

Physiological action.—A committee of the Edinburg Medico-Chirurgical Society, after an extensive series of experiments on men and animals, report, that chloroform inhalation like that of ether, seems to produce loss: "1. Of the cerebral functions; 2. Of the spinal functions; and, thirdly, of those of the medulla oblongata." The loss of consciousness is referred to the effect on the cerebrum, and occurs first in point of time; if the inhalation continues, spinal symptoms appear, such as tetanic spasms, involuntary evacuations, and hysterical symptoms; and, if pursued too far, respiration and the heart's action may become so enfeebled as to result in death. In all the animals killed by it, the right side of the heart was engorged with venous blood. The effects upon the blood require yet to be examined more fully, nothing determinate having yet been announced.

Danger attending its use.—From the effect on animals there remains no doubt that chloroform may produce death. It is consequently a curious fact that so few instances of bad effects have resulted from its indiscriminate use, even for purposes of amusement and by uninformed persons. Though several newspaper paragraphs have met our eye mentioning unpleasant, and even fatal effects, we have before us, in professional journals, but a single fatal case,—that of Mrs. Simmons, of Cincinnati. We had intended giving the report in full, but our space will not admit it.

It may be found in the *Western Lancet*, of March, 1848. Death resulted within ten minutes from commencing to inhale, apparently, from the effect on the heart and respiratory muscles. The brain and lungs, though somewhat, were not extensively congested; general aspect, color, and consistence of the brain normal; pleura highly injected with some effusion; heart flaccid and *all its cavities entirely empty*; the *aorta, pulmonary artery and cava all empty*; blood fluid as water in every part of the body; not a coagulum was seen in any vessel; globules altered; color in every part of the system was that of dark venous blood. The chloroform was of specific gravity, but 1.3. contained some alcohol, and was applied with Morton's inhaler. We do not wish to pre-judge in the case, but we are inclined to refer the bad effects to the alcohol accumulated in the manner we have expressed above.

Antidote to the effects.—None has yet been mentioned. We have been informed by Mr. B. H. Bartlett, of this city, (Chicago,) that he has found morphiæ sulph. placed upon the tongue and allowed to dissolve in the mouth, to remove the effects, very rapidly, of both ether and chloroform. He uses $\frac{1}{2}$ gr. repeated every few minutes. Before our next we will test the value of the suggestion.

We subjoin the remark, (omitted in its proper place,) that the chloroform should have a specific gravity of 1.48. M. Soubeiran, in a late memoir read to the Academy of Sciences, in Paris, "tells us that a rapid method of approximating to this, is by making equal parts of strong sulphuric acid and water, and allowing the mixture to cool. A few drops of the chloroform poured into the fluid ought to sink to the bottom, if sufficiently pure for medical use; but if they float on the surface, the chloroform should be rejected."

J. V. Z. B.

FIFTH ANNUAL CATALOGUE

OF RUSH MEDICAL COLLEGE,

FOR 1847-8.

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D. G. CLARK, M. D., Beloit, W. T.	P. MAXWELL, M. D., do.
C. V. DYER, M. D., Chicago.	R. S. MOLONY, M. D., Belvidere, Ill.
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ANNOUNCEMENT.

THE ANNUAL COURSE OF LECTURES for the Session of 1848 and 1849, will commence on the 1st Monday of November, and continue sixteen weeks.

FEES.—Ticket of Physiology and Pathology, \$5
“ of each other branch, 10
“ of Matriculation, 5—\$70

The Dissecting Ticket is \$5; the Hospital Ticket, \$5; Graduation Fee, \$20.

A credit of twelve months will be given for half the Professors' Tickets only, if secured by a joint note, bearing interest.

Good boarding, with room, fuel, lights, and attendance, can be had in Chicago, at from \$1.50 to \$2.25 per week.

REQUIREMENTS FOR GRADUATION, are three years study and two courses of lectures, one of which must be in this institution, (or four years practice in lieu of one course.) The candidate must have taken the Hospital and Dissecting Tickets once; be 21 years of age; of good moral character; must present a thesis, on some medical subject, of his own composition, and in his own hand writing, which shall be approved by the Faculty, and pass a satisfactory examination on all the branches taught in this College.

CIRCULAR.

THE Trustees and Faculty of this Institution have the pleasure of presenting, with the Fifth Annual Catalogue, evidences of its continued prosperity, and an account of the most substantial and important improvements in the means of imparting instruction.

The number of students in attendance the present session, is double that of any former class.

The Profession will observe, in the following statement of improvements made, and facilities offered to students for acquiring a thorough medical education, proofs of a determination to make it in every way equal to the best schools in the country.

There will be created a new chair of Physiology and Pathology. This course will embrace the recent discoveries in these departments of science; and will be illustrated by observations on the healthy and morbid tissues and fluids of the body, through the most powerful microscopes, and by pathological specimens and plates.

There will be added a course on Medical Jurisprudence. The College Library will be largely extended during the present year. The new set of Chemical and Philosophical apparatus, recently procured, and the full and beautiful cabinet of *Materia Medica*, render the means of illustration in these departments ample.

The cabinets of anatomical and pathological preparations, mineralogical, geological and botanical specimens, surgical and obstetrical instruments and apparatus, are extensive and rapidly increasing.

The dissecting rooms, erected last fall, are convenient, well ventilated, and abundantly furnished with material for dissection, affording facilities for the study of practical anatomy not surpassed by any other institution in the country. As we understand some living at a distance have doubted these facts, they are with confidence referred to students, or other persons acquainted with the institution for a confirmation. A large proportion of the dissecting classes make annually fine preparations, to carry home.

The rooms are open from the 1st of October to the 1st of April, under the care of the Professor of Anatomy.

Seven lectures are given daily during the term, including one hour every morning devoted to clinical instruction in the Chicago Hospital, where, during the present session, 80 patients have been under treatment at one time. Here almost all varieties of disease are presented; and especially those forms that the practitioner will meet in the west.

The rapid increase in the commerce, and in the population of the city of Chicago, which now numbers 17,000 inhabitants, will annually extend the advantages thus afforded.

The diseases of women are illustrated by morbid specimens, the plates of Boivin & Dugés, and the Hospital clinic.

A lying-in dispensary for supplying cases for students will be established immediately.

The surgical ward of the Hospital, and the extensive surgical practice of Professor Brainard, afford opportunities for witnessing the treatment of surgical diseases, and the performance of operations, not surpassed in the west. To illustrate this we subjoin the following list of operations, performed before the College and Hospital classes, from October 28, 1847, to February 2, 1848:

Amputation of Leg, - - - - -	1
“ of Thigh, - - - - -	1
“ of Thumb, - - - - -	1
“ of Fingers, - - - - -	2
Lithotomy, - - - - -	1
Ligature of Popliteal Artery for Aneurismal Varix, - - -	1
Trephining for ancient depression of cranium, - - -	1
Operation for Hare Lip, - - - - -	3
“ for Fissure of Palate, - - - - -	1
“ for Strabismus, - - - - -	5
Division of Tendo-Achilles for Club Foot, - - - - -	4
“ of Tibialis Anticus, - - - - -	2
“ of Tendon of Biceps Flexor Cruris, - - - - -	1
“ of Semitendinosus and Semimembranosus, - - - - -	1
Plastic operation for Entropion, - - - - -	2
“ “ for Deformed Nose, - - - - -	1
“ “ for Deformity of Lip, - - - - -	1
Operation for Fistula in Perineo, - - - - -	1
“ “ “ in Ano, - - - - -	2
“ “ cure of Spina Bifida, by injections of Iodine, - - -	1
“ “ radical cure of Hernia, - - - - -	1
“ “ Ptosis, - - - - -	2
“ “ obliteration of Varicose Veins by Caustic, - - - - -	3
“ “ “ “ by Needles, - - - - -	1
Excision of Hemorrhoids, - - - - -	1
Extirpation of Glandular Tumor of Neck, - - - - -	1
“ of Tonsils, - - - - -	2
“ of a Neuroma, - - - - -	1
Operation for Rupture of Synovial Cyst, - - - - -	1
“ for removal of fragment of stone from the face, - - -	1
Dressing of Fracture of Clavicle, - - - - -	1
“ “ of Tibia and Fibula, - - - - -	1
Reduction of Dislocation of Ulna, - - - - -	1—50

Besides numerous smaller operations, such as opening abscesses, dressing ulcers, &c. &c.

All operations performed gratuitously before the class.

A course of summer instruction will be given, (see cover.)

CATALOGUE OF STUDENTS.—1847-8.

<i>Name.</i>	<i>Residence.</i>	<i>Preceptor.</i>
Wm. Adams,	Ills.	Dr. E. Pomeroy,
Jehu Adkins,	Ia.	" J. G. Jones,
M. V. Allen,	Ills.	" E. Pomeroy,
J. L. Anderson,	Ills.	" H. E. Smith,
H. T. Baldy,	Mich.	" P. L. Baldy,
Wm. H. Bartlett,	Mich.	Drs. Thayer & Bartlett,
J. B. Batchelder,	Ills.	Practitioner.
C. H. Bicknell,	W. T.	Dr. G. W. Bicknell,
Wm. Brooks,	Ills.	" A. L. Merriam,
Clay Brown,	Ia.	Professor Evans,
H. T. Brown,	Ills.	Dr. W. P. McAllister,
B. F. Butler,	"	Professor Blaney,
Joseph Blount, M. D.	"	
Jesse Calloway,	"	Dr. John Jones,
D. M. Camerer,	"	" J. Tenbrook,
Wm. W. Cavarly,	"	" J. Pearson,
Wm. Chamberlain,	"	Practitioner,
Lafayette Chesley,	W. T.	Dr. L. D. Boone,
Asa Clark,	Ills.	Professor Brainard,
J. A. Clarke,	W. T.	Dr. D. A. Lathrop,
T. G. Cole,	Ills.	" A. E. Ames,
Daniel M. Cool,	"	" J. F. Daggett,
F. W. Coolidge,	"	" A. W. King,
W. F. Coleman,	"	Professor Herrick,
L. W. Crabtree,	"	Drs. Goodwin & Oatman
Alfred Crane,	Ia.	Dr. Anthony Garrett,
A. B. Crawford,	Mich.	Practitioner,
Harvey Cutler,	Ills.	Professor Blaney,
C. M. Daniels,	"	Dr. G. W. Richards,
M. D. Darnall,	"	Practitioner,
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James P. Dimmitt,	Ia.	" T. A. Henderson,
A. Draper,	"	Drs. Newkirk & Saunders
A. S. Doolittle,	Ohio.	Dr. Kirtland,
Robert W. Earle,	W. T.	Drs. Clarke & Rice,
R. C. Edgerton,	Ills.	Dr. L. A. Hannaford,
James M. Ely,	Ia.	Dr. E. S. Russell,
Orpheus Everette, M.D.	Ills.	

<i>Name.</i>	<i>Residence.</i>	<i>Preceptor.</i>
J. J. Everette,	Ills.	Practitioner,
James A. Finch,	"	Dr. J. W. Tucker,
Francis Forbes,	"	" C. Martin,
J. W. Freer,	"	Professor Brainard,
M. B. Gleason,	"	do. do.
Derick Golder,	"	Dr. W. W. Sedgwick,
Uri P. Golliday,	"	Practitioner,
J. W. Gordon,	Ia.	Drs. A. J. & B. F. Mullen
John Gregory,	Ills.	Dr. L. A. Hannaford,
Israel G. Harlan,	"	" S. Roach,
Wm. C. Harris,	Ia.	" J. H. McNutt,
Obed Harvey,	Ills.	" G. W. Richards,
O. W. Hatch,	Ia.	" J. H. Henry,
Rush S. Haven,	Ills.	Professor Blaney,
R. S. Hawley,	Mich.	Dr. S. B. Thayer,
A. A. Hemenway,	W. T.	Practitioner,
S. M. Henderson,	Ia.	Professor Evans,
George Higgins,	Ills.	Dr. Daniel Eastman,
W. M. Hobbie,	"	Professor Brainard,
J. C. H. Hobbs,	"	Dr. A. M. G. Comstock,
Noble Holton,	"	" A. L. Merriam,
E. G. Hough,	"	Practitioner,
George S. Huey,	"	Professor Herrick,
John L. Ingersoll,	"	Drs. Adams & Ingals,
F. B. Ives,	"	Dr. Isaac Ives,
Isaac S. Ives,	"	do. do.
F. W. Jarvis,	"	Dr. G. W. Richards,
Orris S. Johnson,	"	" A. W. King,
A. A. Jones,	"	" Rufus Hopkms,
Ambrose Jones,	W. T.	" Hunt,
Oliver B. D. Jones,	Ills.	" G. W. Richards,
B. T. Kavanaugh,	Ia.	Professor Evans,
E. H. Keables,	Mich.	Practitioner,
E. S. Knapp,	Ills.	Dr. W. H. Crandell,
C. W. Knott,	"	Practitioner,
Calvin B. Lake,	"	Dr. Leonard L. Lake,
R. B. Landon,	"	" M. L. Knapp,
Sample Lofton,	Ia.	" J. Blades,
J. Collins Lovejoy,	"	" W. G. Montgomery,
Wm. Mathews,	"	Practitioner,
Orrin T. Maxson,	W. T.	Dr. J. W. Beardsley,
Thomas P. McCrea,	Ia.	Professor Fitch,
James McCollum,	"	Dr. L. Barber,
A. R. McFarlan,	Mich.	" A. B. Crawford,
Jno. E. McGirr, M.D.,	Ills.	Practitioner,

<i>Name.</i>	<i>Residence.</i>	<i>Preceptor.</i>
P. B. McKay,	Ills.	Dr. E. G. Mygatt,
David McKysick,	Pa.	Practitioner,
J. H. McNutt,	Ia.	Dr. Bowen,
C. D. Merwin,	Ills.	" H. H. Beardsley,
C. E. Miller,	Ia.	" Charles Brackett,
C. A. Mills,	W. T.	Practitioner,
Selden Miner,	Ills.	Dr. M. F. Irwin,
T. C. Moor,	Ia.	Professor Fitch,
John R. Morrison,	W. T.	Dr. Joseph Winslow,
John Newton,	Ia.	" John Tenbrook,
John Nutt,	"	Professor Evans,
W. H. Oatman,	Ills.	Drs. Goodwin & Oatman
J. G. Osborne,	Ia.	Professor Evans,
Orvin C. Otis,	W. T.	Practitioner,
S. S. Parkhurst,	Mich.	Dr. Asabel Beach,
W. J. Paugh,	Ia.	" A. J. Mullen,
J. Pearson,	Ills.	Practitioner,
D. E. Perry,	"	Dr. G. W. Richards,
Amos Pettyjohn,	Ia.	" D. Pettyjohn,
E. K. Phillips,	Ills.	" D. K. Town,
John Phillips,	W. T.	" N. L. Eastman,
J. M. Phipps,	Ia.	Professor Evans,
W. W. Porter,	Ills.	Dr. S. Christy,
Amos Pratt,	"	Practitioner,
C. B. Read,	"	Dr. Joseph Tefft,
A. Reynolds,	"	" A. R. Reynolds,
George Richards,	"	" G. W. Richards,
John Riches,	"	Practitioner,
George Ryon,	"	Dr. Isaac Ives,
W. W. Sedgwick,	"	Practitioner,
Charles C. Shoyer,	W. T.	
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J. R. Snelling,	Ia.	Professor Fitch,
Edwin Stewart,	Mich.	Dr. S. B. Thayer,
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R. R. Stone,	"	" G. W. Richards,
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Edward Thomas,	"	" Daniel Eastman,
Robt. J. Thomas,	"	Practitioner,
Wm. Townsend,	Ia.	do.
James P. Tucker,	"	do.
John J. Van Dalsem,	Ills.	Professor Brainard,
Charles Ware,	W. T.	Dr. J. K. Bartlett,

<i>Name.</i>	<i>Residence.</i>	<i>Preceptor.</i>
J. H. Warren,	W. T.	Dr. S. F. Nichols,
L. W. Warren,	Ills.	" Edward Mead,
C. C. Warner,	W. T.	" L. N. Wood,
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Gaylord S. Wells,	"	" C. V. Dyer.
G. W. Wentworth, M.D.	"	Practitioner,
Charles Wheeler,	"	do.
George S. Wheeler,	"	
E. M. Winslow,	W. T.	Dr. C. A. Mills,
J. Woodworth,	Ills.	" G. W. Richards,
E. W. Young,	"	" J. B. Herrick,

SUMMARY.

Illinois,	-	-	-	-	85
Indiana,	-	-	-	-	28
Wisconsin Territory,	-	-	-	-	16
Michigan,	-	-	-	-	10
New York,	-	-	-	-	1
Pennsylvania,	-	-	-	-	1
Ohio,	-	-	-	-	1
Total,	-	-	-	-	142

Students are recommended to supply themselves with the following works on the different subjects, the Library not supplying text books:

Anatomy—Horner's or Wilson's, and Wilson's Dissector.

Surgery—Cooper's Dictionary, Cooper's First Lines, Miller's, Drutt's or Fergusson's Surgery.

Practice of Medicine—Watson's, Stokes and Bell's or Wood's Practice.

Chemistry—Fownes', Kane's or Graham's.

Obstetrics, &c.—Ramsbotham's, Lee's or Chailly's Midwifery; Ashwell or Churchill on Females; Condie or Stewart on Children.

Materia Medica, &c.—Pereira's Materia Medica or United States' Dispensatory, and Guy's Forensic Medicine.

Physiology—Carpenter's, Müller's or Todd & Bowman's.

For further information, apply to

Dr. Brainard, Blaney, or Herrick, Chicago, Ill.

" John McLean, Jackson, Mich.

" G. N. Fitch, Logansport, Ia.

" John Evans, Indianapolis, Ind., or

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